

THE
Deseret
MAGAZINE

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NOVEMBER, 1939

ANNIVERSARY NUMBER

25 CENTS

LETTERS

Salt Lake City, Utah

Dear Mr. Henderson:

Have just read with interest Mr. White's story of the "sandspikes" in today's Desert. My theory is that these peculiar formations are petrified gopher holes. There are several reasons for this theory. They are always the same shape and always found in colonies.

The prehistoric gophers dug their holes with a small burrow at the bottom. A flood, carrying silica and lime filled in the holes. The whole formation was later turned to rock. Thousands of years later the formation was eroded. The filling of the gopher holes proved to be harder than the surrounding rock, and they weathered out, finally falling horizontal on the surface. They were then covered with windblown sand.

The stem is the former gopher hole, and the ball at the bottom is the burrow. Petrified gopher holes are a scientific fact, verified by the Smithsonian experts. They have been found in the badlands of South Dakota.

CHARLES KELLY.

• • •

Reno, Nevada

Dear Mr. Henderson:

While on the desert collecting plants, I saw this little tragedy, which I think bears telling.

A 5-foot diamondback rattlesnake with her two young were gliding through the sagebrush. Her head turned from side to side, her tongue flashing in and out. She sensed danger, stopped and coiled with her rattles buzzing.

A horde of brown crickets overtook the snakes at that moment and immediately covered the reptiles. The mother snake struck, landing three feet from her young. She coiled and struck again, but on her third attempt the crickets weighted her down so she could hardly lunge forward. She finally reached her young by lashing and fighting, but they were already torn to pieces.

Unable to rid herself of this strange enemy she struck herself twice but without apparent effect. Within 20 minutes the rattler and her young were stripped of all flesh. The brown horde marched on. Crickets coming from behind stopped briefly at the skeletons of the snakes and eventually even the rattles were consumed.

TIM L. BREENE.

This unusual incident was witnessed along state highway 21 three miles from Beowawe according to Mr. Breene. The scourge of the crickets this summer was so bad that motorists had to drive in low gear to keep from skidding as hordes of the insects were crushed on the highway.

• • •

Roswell, New Mexico

Gentlemen:

Enclosed is check for \$5.50 for which please send me the November 1938 and January 1939 issues of your magazine, and also three years' subscription beginning with February, 1940 when my present term expires.

I need the numbers mentioned in order to complete my file. My first contact with your magazine was when I sneaked across the road to Hilton's gem shop while my wife was drinking a date milk shake at Valerie Jean's.

When the people in the gem shop saw

my precious glass I reluctantly gave one of how longingly I looked at all the minerals they had they knew I would like the magazine and persuaded me to buy it. I am glad I did for it certainly hits the spot when I read the articles on minerals. My main interest in your magazine is in the articles which give the location of the different mineral specimens. I also enjoy the features that deal with early history of the Southwest and the biographies of the men who did big things in this section of the country.

Here is wishing you continued success.

W. FINCH WHITE, Jr.

• • •

Los Angeles, California

Dear Mr. Henderson:

The Desert Magazine is usually so accurate that a few lapses are the more noticeable.

In the October issue, "True or False" quiz, question 16: "The Bisnaga or barrel cactus often grows to a height of 12 feet or more," is answered on page 32, "False, Bisnaga seldom grows higher than six feet."

The Bisnaga indigenous to Santa Catalina island and other islands in the Gulf of California frequently attains a height of four meters (13 feet), a fact that your quiz editor could not be blamed for missing if he is not familiar with the Sonoran deserts in their entirety.

However, the fact is that this particular Bisnaga known as *Ferocactus diguetii*, does frequently exceed 12 feet in height.

Ferocactus pringlei from Coahuila and Zacatecas, *Ferocactus rostii* of the lower Imperial valley (near San Felipe, B. C.) and *Ferocactus acanthodes* of the Colorado and Mojave deserts, all known as Bisnaga frequently attain a height of three meters, and *Ferocactus covillei*, a Bisnaga common in Arizona and Sonora attains a height of over eight feet in the vicinity of Empalme, Sonora.

All of which is in the interest of "a better understanding of terophytic plants," the aim and object of the Cactus and Succulent Society of America.

W. TAYLOR MARSHALL, President.

Thanks, Mr. Marshall, for this information. We are always glad to be corrected by a man who knows his subject as well as you know cactus. — R. H.

• • •

29 Palms, California

To the Broken Glass Editor:

The September number of the Desert Magazine would like to take the joy out of our desert lives with the breaking of our colored glass illusions.

Why deprive us of the thrill of exploitation of our desert as a creator of purple glass? We haven't a Carlsbad caverns under the earth to explore. Nor the Grand Canyon of Arizona to fly over. We cannot point a finger of pride at the armed Saguaros. But we can bask in the purple glow of our colored glass collection.

When I came to the desert in 1936 seeking health I first landed in Palm Springs. Entering a curio store or Indian trading post I asked the courteous manager if the climate was beneficial to asthmatics. He answered by pointing to a purple glass globe on an open porch. He said: "That was made purple by the ultra-violet rays of the sun—and why wouldn't that cure all ills?"

To make a short story out of this, I am nicely located in the desert at 29 Palms. In August my relatives from the frozen zone of San Francisco visited me. At the proper time I took them to my pile of glass under a squaw tea bush in my yard. After telling them about

them a little pitcher that had been in the sun five months. Of course they were pleased.

That day I received my September Desert Magazine, and passed it unopened to my desert-hungry relatives. Then all at once I heard them laughing. "Read this," they said, "about colored glass."

My face was red and my voice was full of fire when I told them what I thought about an editor who would be so brutally honest as to destroy all my pet illusions about purple glass. And am I peeved?

MRS. H. A. WELLS.

Sez Hard Rock Shorty of ... Death Valley

By LON GARRISON



"YEAH—I know," sourly remarked Hard Rock Shorty. "I read a book oncet an' it said that the puckerin' power o' these desert alum water springs is generally vastly exaggerated. Durn idiots—why I've saw things the book writers'd absolutely claim was lies—but I saw 'em, an' I don't need no better proof 'n that."

Hard Rock moved his chair farther back into the shade and went on with his discourse.

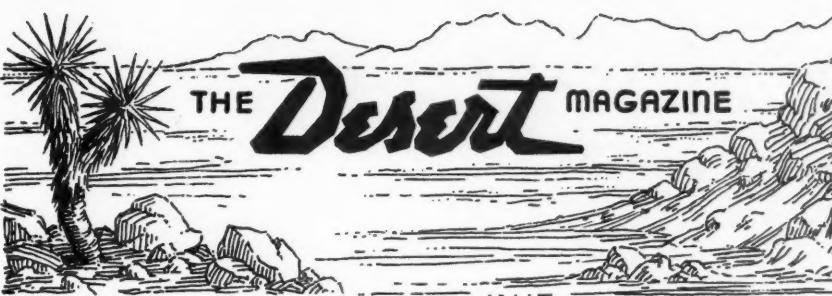
"I seen a guy oncet that had some o' this water dropped on his cigar he'd just lighted an' it pulled the thing right down to where it burned his whiskers afore he c'd drop it. I seen a clerk oncet that was writin' an' he got some spilled on his pencil an' it not only shrunk up the pencil, it pulled the last four words right off the paper."

"But the best illustration I ever had o' this shrinkin' power was right over here to the bank. I went in an' borrowed a hundred dollars for six months. Afore I c'd get out the door, the president in puttin' the note down on his desk'd spilled a little bottle o' alum water he had there an' it run over the paper. When we got it mopped up, we found out the durn note was three weeks over due. Not only that, it'd reduced the interest rate so far that when we figgered it all up the banker owed me nineteen dollars an' forty-three cents."

193945

DESERT Calendar

- OCT. 25—NOV. 1 New Mexico Education association meeting in Albuquerque.
- 28 Annual Jamboree of Arizona Small Mine operators association at Tucson. C. M. d'Autremont, general chairman. Parade of mining progress, exhibit hall of ores and processes.
- 31 Nevada's 75th birthday celebrated at Carson City. Sponsored by Admission Day committee and directed by Business and Professional Woman's club.
- NOV. 1 All Soul's Day, Dawn ceremony, Taos Pueblo, New Mexico.
- 1-4 National Sciot convention, Phoenix, Arizona. C. P. Niles, chairman.
- 1-15 Arizona quail season; bag limit, 10 per day or in possession.
- 1-25 Deer and turkey seasons in New Mexico.
- 2 Arizona Mineralogical society meets at Arizona Museum, Van Buren at 10th, Phoenix.
- 4 University of Arizona's homecoming football game, Tucson.
- 4 Arizona Pioneers' Historical society annual meeting, Tucson.
- 8 Prehistoric Indian jewelry subject of illustrated lecture by Clara Lee Tanner of the University of Arizona, at Arizona Museum, Phoenix.
- 10-12 Annual Papago Indian fair and rodeo at Sells, Arizona. Richard Hendricks, chairman.
- 12 Fiesta of San Diego, Tesuque and Jemez Pueblos, New Mexico. (Harvest Corn dance, Jemez; Buffalo dance, Tesuque.)
- 15 Dr. Frank C. Lockwood lectures at Arizona Museum on Sylvester Mowry, pioneer Arizona miner.
- 15 Arizona open season on mourning doves closes.
- 15-18 California Federation of Women's clubs, southern district, to hold annual convention in El Centro, California. Mrs. R. W. Ware, convention chairman.
- 15-DEC. 29 Hunting season on ducks, geese, Wilson's snipe or jack snipe, and coots in Arizona and New Mexico.
- 16 Second October meeting of Mineralogical society at Arizona Museum, Phoenix.
- 16 Close of 30-day turkey, bear and deer seasons in Arizona.
- 16-18 48th Annual convention, Arizona Education association, Phoenix. J. J. Clark, Phoenix, president. Open to Indian service teachers, Boy Scout leaders and P-T. A. members for first time.
- 19 Rev. Victor R. Stoner lectures on Coronado's Journey at Arizona Museum, Phoenix.
- 24-26 State Hobby Fair, auspices Phoenix Junior chamber of commerce. Dr. A. G. Horton, ASTC at Tempe, chairman.
- 25-26 and DEC. 2-3 Annual Horse race meet at Las Vegas, Nevada. Tommy Thebo, chairman.



Volume 3

NOVEMBER 1939

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"NEWSPAPER ROCK" in Petrified Forest national monument. Photograph by Dr. Warren F. Fox, El Centro, California.

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RANDALL HENDERSON, Editor.

TAZEWELL H. LAMB, Associate Editor.

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Fortresses of Peace

By GENE O. PARKS
Las Vegas, Nevada

These adobe houses were reconstructed near Overton, Nevada, in accordance with the archaeologists' concept of the ancient Indian dwellings which once

were located here. This is not far from the "Lost City" where excavation work in the old Indian ruins was carried on for several years until the rising waters of Lake Mead covered the site.

The photograph awarded first place in the Desert Magazine's September contest was taken with a 2 1/4x2 1/4 Horelle-Reflex camera, 1/16 exposure at f16 on super pan press film with light red filter. Exposure was late in the afternoon on an August day.

Design in Mud

By MRS. C. L. BRIGGS
Arlington, California

Awarded second place in the monthly photographic contest of the Desert Magazine in September. This unusual photograph was taken in a small dry lake north of Benton, California, two days after a thunder-shower had drenched that desert area. The contrast is created by the uneven drying of the adobe in the lake bottom, the dark patches being still wet.

Picture taken July 27 at 7:00 a. m. with a Kodak Junior Six 16, f11 at 1/25 second.



The DESERT MAGAZINE



There Are Two Deserts . .

(Reprinted by request from the first issue of
the Desert Magazine, November, 1937.)

ONE IS A GRIM desolate wasteland. It is the home of venomous reptiles and stinging insects, of vicious thorn-covered plants and trees, and of unbearable heat. This is the desert seen by the stranger speeding along the highway, impatient to be out of "this damnable country." It is the desert visualized by those children of luxury to whom any environment is unbearable which does not provide all of the comforts and services of a pampering civilization. It is a concept fostered by fiction writers who dramatize the tragedies of the desert for the profit it will bring them.

But the stranger and the uninitiated see only the mask. The other Desert—the real Desert—is not for the eyes of the superficial observer, or the fearful soul or the cynic. It is a land, the character of which is hidden except to those who come with friendliness and understanding. To these the Desert offers rare gifts: health-giving sunshine—a sky that is studded with diamonds—a breeze that bears no poison—a landscape of pastel colors such as no artist can duplicate—thorn-covered plants which during countless ages have clung tenaciously to life through heat and drought and wind and the depredations of thirsty animals, and yet each season send forth blossoms of exquisite coloring as a symbol of courage that has triumphed over terrifying obstacles.

To those who come to the Desert with friendliness, it gives friendship; to those who come with courage, it gives new strength of character. Those seeking relaxation find release from the world of man-made troubles. For those seeking beauty, the Desert offers nature's rarest artistry. This is the Desert that men and women learn to love.

Nearly every creed and industry and locality has its journal—except the Desert. Here, within the boundaries of Arizona, California, Nevada, New Mexico and Utah resides a great family of human beings—the highest type of American citizenship—with a common heritage of environment and interest

. . . one is grim, desolate

and opportunity, yet residing for the most part in regions that are remote from the so-called cultural centers.

This is the last great frontier of the United States. It will be the purpose of the Desert Magazine to entertain and serve the people whom desire or circumstance has brought to this Desert frontier. But also, the magazine will carry as accurately as possible in word and picture, the spirit of the real Desert to those countless men and women who have been intrigued by the charm of the desert, but whose homes are elsewhere.

* * *

This is to be a friendly, personal magazine, written for the people of the Desert and their friends—and insofar as possible, by Desert people. Preference will be given to those writers and artists—yes, and poets—whose inspiration comes from close association with the scented greasewood, the shifting sand dunes, the coloring of Desert landscapes, from precipitous canyons and gorgeous sunsets.

The Desert has its own traditions—art—literature—industry and commerce. It will be the purpose of the Desert Magazine to crystallize and preserve these phases of Desert life as a culture distinctive of arid but virile America. We would give character and personality to the pursuits of Desert peoples—create a keener consciousness of the heritage which is theirs—bring them a little closer together in a bond of pride in their Desert homes, and perhaps break down in some measure the prejudice against the Desert which is born of misunderstanding and fear.

It is an idealistic goal, to be sure, but without vision the Desert would still be a forbidding wasteland—uninhabited and shunned. The staff of the Desert Magazine has undertaken its task with the same unbounded confidence which has brought a million people to a land which once was regarded as unfit for human habitation.

We want to give to the folks who live on the Desert—and to those who are interested in the Desert—something that will make their lives a little happier and a little finer—something worthwhile. In the accomplishment of this purpose we ask for the cooperation and help of all friends of the Desert everywhere.

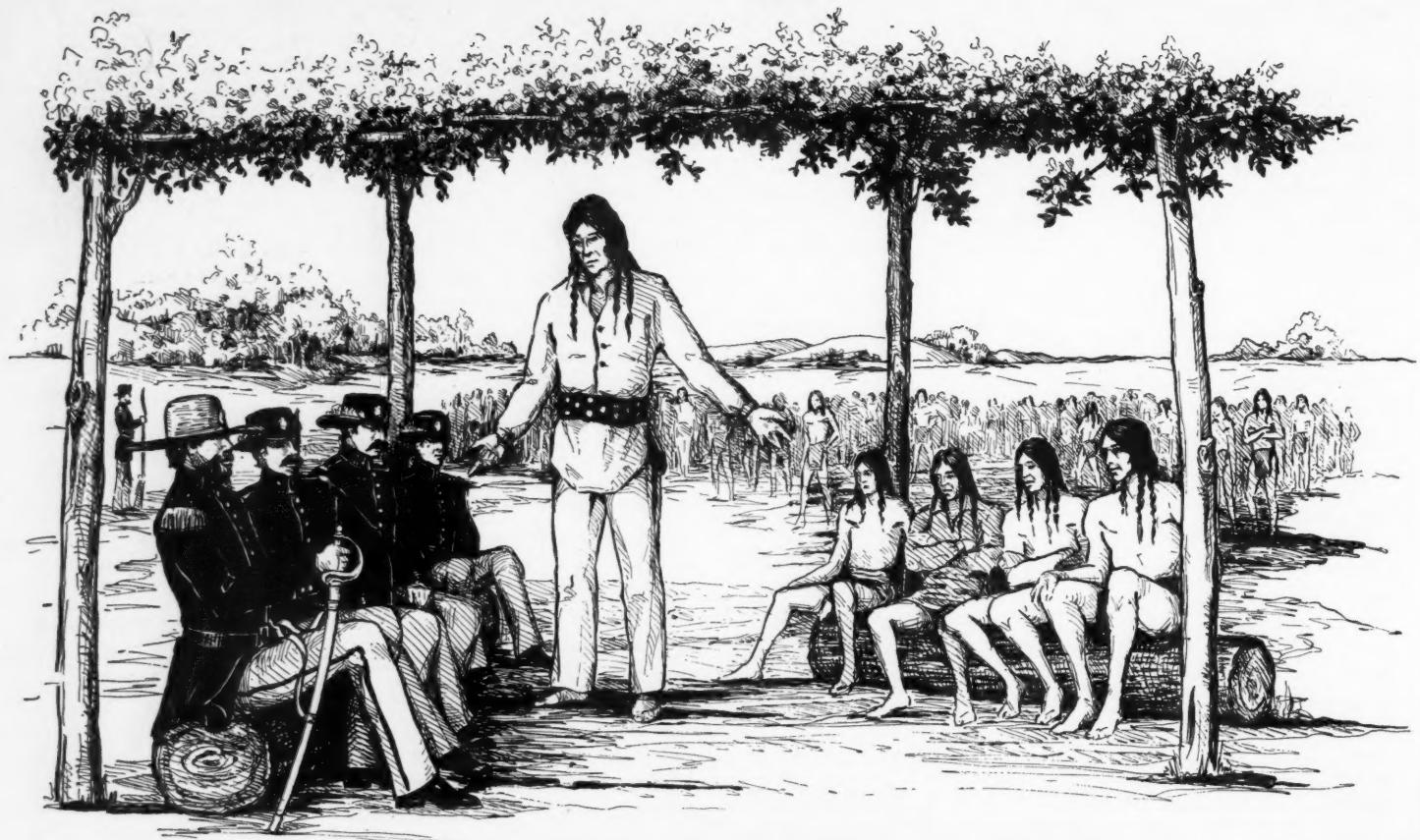
THE STAFF.

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Col. Hoffman and his officers met with the Mojave headmen in a council of peace.

Outpost on the Colorado

By ARTHUR WOODWARD

IN 1857 when Congress voted \$300,000 for building three transcontinental roads to the Pacific coast California newspaper editors wrote bitter words in denunciation of the lawmakers at Washington.

"Just a filthy sop," said one writer. It would take ten times that much to build one good road. What California really needed was a railroad—and this miserly appropriation for wagon roads would merely serve as an excuse for delaying the railroad project.

But Congress had more serious worries at that moment than the editorial opinions of California newspaper men. A bitter feud had developed between northern and southern states over the question of slavery—and there was even talk of civil war. Under the circumstances the sparsely populated West probably was fortunate in getting the \$300,000.

To Lieutenant Edward Fitzgerald Beale was assigned the task of building the road across the desert plateau from Albuquerque to Los Angeles. He was allotted \$50,000 for the job. It wasn't

When the Mojave Indians went on the warpath in 1858 and killed several members of an emigrant train near the present site of Needles, California, the war department immediately sent troops to discipline the marauding redskins and establish Fort Mojave on the banks of the Colorado river. From ancient archives of the army, and from other sources, Arthur Woodward has obtained the material for a graphic story of the soldiers and emigrants and Indians who occupied the stage in that drama of the southwestern frontier.

much money for the construction of 1500 miles of highway across an arid desert rimmed with towering mountain ranges. But Lieut. Beale had enthusiasm born of implicit faith in the success of the project.

His survey followed approximately the present route of U. S. Highway 66, swinging south past Inscription rock and

the Zuni villages in New Mexico and then crossing the desert plateau of northern Arizona along a line which offered the maximum supply of water, grass and wood.

At the Colorado river the road passed through the heart of the Mojave country where the Indians claimed dominion over the fertile bottom lands. The Mojaves were none too friendly and in order to insure protection for emigrant trains which would be coming this way the lieutenant recommended that a military post be established at this point.

But Washington was slow to act—and the lieutenant's recommendation was still resting in an official pigeonhole at the national capital when the first emigrant caravan came over this route in the spring of 1858.

Starting from Van Buren county, Iowa, under the leadership of Leonard J. Rose, the party was attracted to the Beale route by reports of abundant grass and water, and shorter mileage to the Promised Land of El Dorado.

At Albuquerque the Iowans were joined by another group of California-bound emigrants, making a total of 123

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men, 33 women and 47 children in the train.

Mute reminders of this party may be seen today at Inscription rock where the names of "John Udell, age 63, First Emigrant, July 8, 1858" and "Isaac Holland First Emigrant train from Mo., July 8, 1858" appear carved in the sandstone between the De Vargas inscription of 1692 and that incised by Ramon Garcia Juldo in 1709. Little Kate Brown, daughter of Alpha and Mary Brown, her father being Rose's foreman on the trip, marveled at the ease with which the knife blades cut into the rock, and child-like wondered how some of the names could have been carved so high upon the sides of the monolith.

It was a heart-breaking journey. Water and grass were not plentiful at this mid-summer period. The train rested for a time beside a cool spring at the foot of San Francisco peaks and then trekked westward toward the Colorado river. It was rough country. The water supply ran short and both men and oxen were nearly crazed with heat and thirst before they reached the rim of the plateau where the silver ribbon of the Colorado could be seen in the distance. Even then it required three hideous days of toil and

PHOTOGRAPHS

The rare old prints accompanying this story are from the collection of Francis P. Farquhar of San Francisco. In lending them to the Desert Magazine for reproduction Mr. Farquhar wrote: "Part of them were taken by d'Heureuse of the State Geological Survey possibly as early as 1863, certainly not later than 1867. The others were taken by Clarence King on his trip to Arizona in 1866."

suffering before they came to the banks of the stream. At one point it was necessary to unspan the oxen and lower the wagons by hand over a precipitous wall of rock.

Finally the advance wagons reached a little haven of cottonwood trees on the

Showing what the well dressed Mojave Indian was wearing during the 1860s. Some of the articles of clothing worn by these savages may have been stolen from the Rose emigrant train at the time of the massacre.

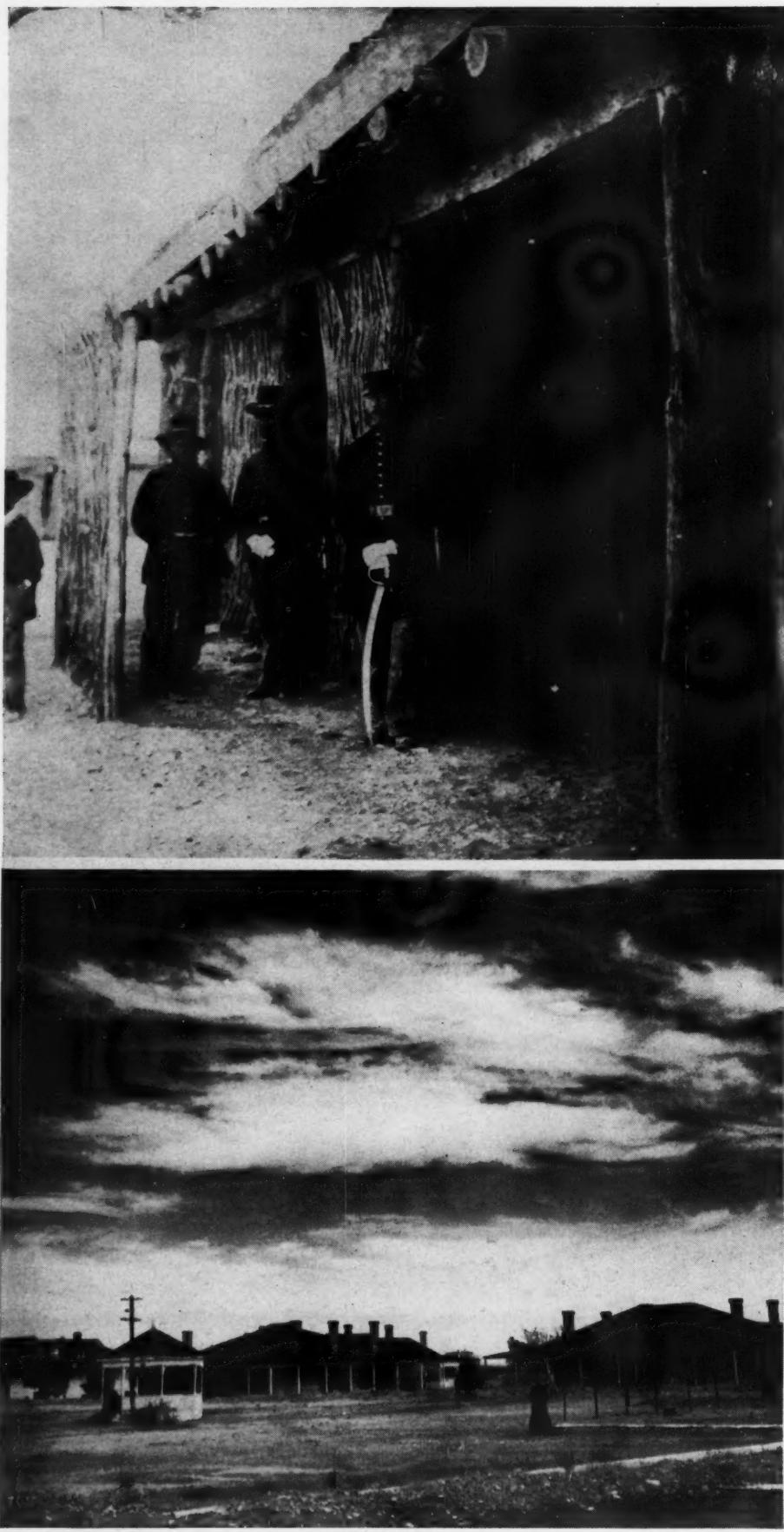
banks of the river. Part of the train was still two miles back along the trail. Rose and others explored the banks seeking a place to cross the wagons. They found a point where the river could be forded and the wagons were corralled on the edge of the stream in a half circle with the river on one side as a protective barrier.

Some of the Mojave had met the train and demanded and received gifts in payment for permission to pass through their territory. Now as the wagons were being drawn into place it was noted that large numbers of Indians were swimming the stream from the opposite shore, holding their war bows above their heads to prevent the strings from becoming wet. The men discussed the incident, but did not feel they were in serious danger of attack. What chance would the redskins with their primitive weapons have against white men armed with guns?

The assault came with stunning suddenness. It was just before noon August 1, 1858, when from the thickets that surrounded the camp came a rain of arrows.

The two little Brown girls playing with their dolls screamed and ran for the protection of their father's wagon. The





Above—Capt. Atchison with his orderly and clerk at Fort Mojave soon after it was established.

Below—Fort Mojave today. The government still keeps a watchman on duty.

startled Iowans scrambled to their feet and dazedly responded to the attack with a scattered burst of musketry. The Indians had caught them off guard during their siesta hour. Alpha Brown who had been outside the wagon circle with a party of men cutting wood mounted his horse and raced toward the corral when the firing began. His men followed him. From the mesquite jungle a deluge of war shafts met the startled farmers. Brown was pierced through and through. He drove his horse through the barricade and fell to the dust inside the corral gasping, "Rose, where's my wife? I'm shot full of arrows" and died.

The white men rallied quickly. Rose filled a basket with percussion caps and paper cartridges and placed it where all could secure fresh ammunition. He went to the wagon where Mrs. Brown and her two girls and small son crouched on the floor and brought forth a number of butcher knives saying: "Our ammunition is giving out, and we do not know but it may come to a hand to hand fight."

An arrow ripped through the canvas cover and pierced the side of Kate Brown's sister. The child cried out, "Mother, I'm shot," and fainted. Her wound was not serious and she later recovered. A Methodist minister in the train seized a musket and fought during the long afternoon. One redskin wearing a small dinner bell at his waist received a ball from the preacher's gun and was immediately converted into a good Indian.

At sunset the Indians drew off, driving before them the stock which had been cut loose and captured. Some of these oxen escaped from the Mojave and strayed back to camp. Half the party were wounded. Eight men from the wagons camping back along the trail heard the firing and attempted to break through the Indian besiegers to aid their companions. All of them were ambushed and slain.

The emigrants held a council. They voted to take their few remaining head of stock and retrace their steps to Albuquerque. All hopes of crossing the river were abandoned.

That night, under cover of darkness they broke camp and slipped away carrying their wounded. They had few provisions and few wagons. The men walked with their rifles cocked. Women and children wept silently. From the distance came the triumphant yells of the Mojave. The party expected at any moment to be ambushed.

Behind them, at the deserted camp grounds the Mojave celebrated by cremating the remains of the murdered travelers. The abandoned wagons were broken and burned. Boxes and barrels were opened and the contents scattered, feather beds ripped to pieces.

Their feet stuck in mud, their hands and faces black with dirt, they were ragged, starving remnants of the party arrived in Albuquerque. News of their approach was brought to the army officers at that town and several wagons loaded with supplies were sent to aid the famished people.

Two mass meetings were held by the survivors and citizens of Albuquerque and at the second meeting which was held at the Atlantic and Pacific Railroad Hotel on the evening of December 9, among other resolutions was this:

"Resolved, that we are of the opinion that there ought to be a strong military post placed without delay on the Colorado of the West in the heart of the Mojave nation, where Lieut. Beale's route crosses said river."

Copies of this resolution were forwarded to various newspapers and promi-

nent military and civil officials east and west.

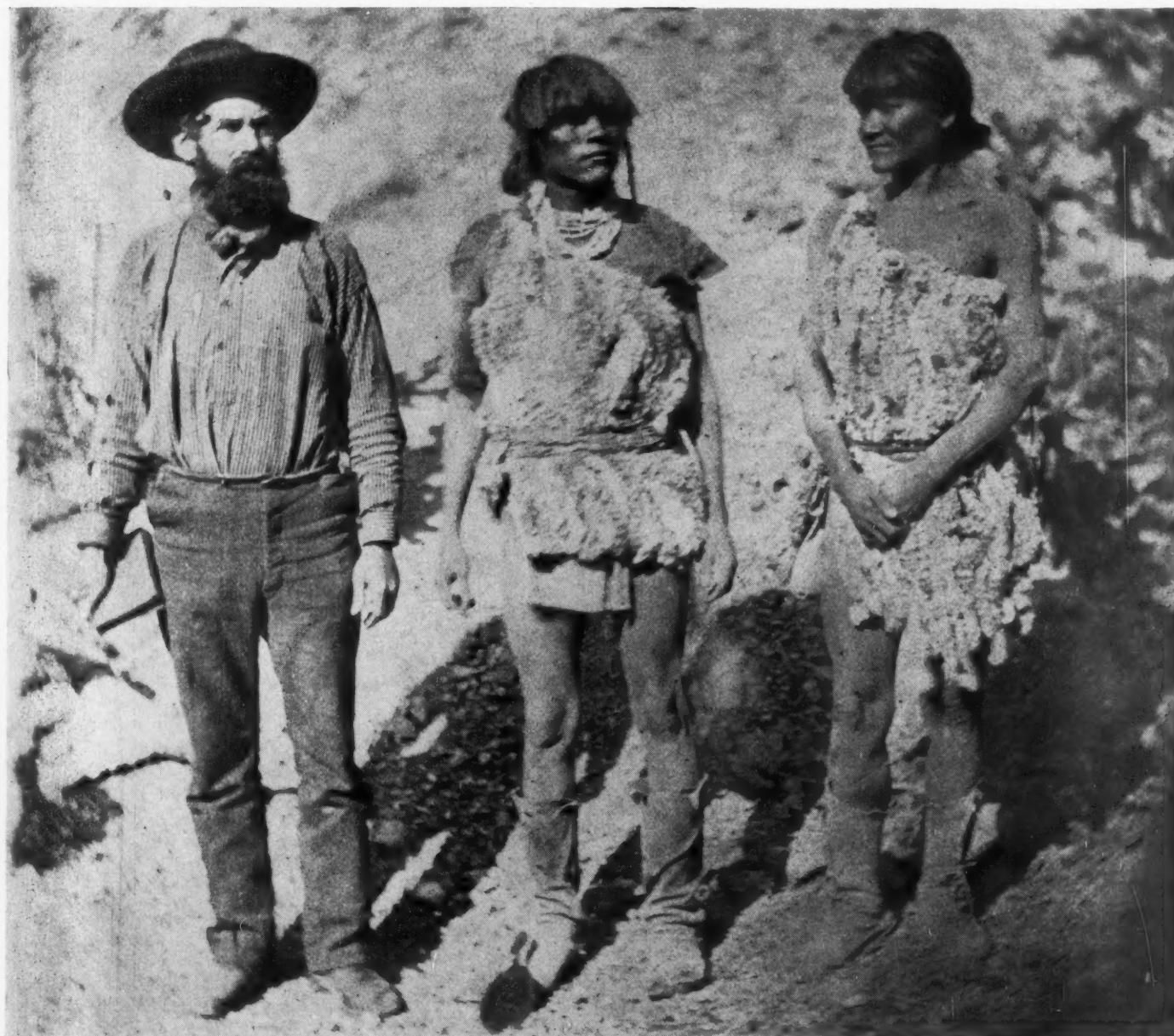
The war department moved swiftly. Official red tape was speedily cut. Orders were dispatched to General Clarke in command of the military on the Pacific coast to select a site for a two-company post on the west bank of the Colorado river near Beale's crossing.

Immediately preparations were started at the Presidio of San Francisco for dispatching an armed force of 600 men into the heart of the Mojave country to subdue the tribesmen and build a fort.

February 11, 1859, the steamer *Uncle Sam* put to sea with four companies of the 6th Infantry on board. The vessel arrived at the mouth of the Colorado river February 27, being the first ship of over 200 tons to navigate the gulf. The current was rapid and the steamer had to

anchor 25 miles from the mouth of the river while the soldiers were transferred on the schooner *Monterey* to a point 25 miles upstream where they were again shifted to the steamers *Colorado* and *General Jessup* for their journey to Fort Yuma.

It was a tedious, dangerous trip. The channels of the Colorado were uncharted and constantly shifting. The winds blew steadily from the northwest carrying clouds of sand across the water and at night the air was dank with fog. True to tradition the troopers cursed the country and the Indians. The *Colorado* drew only 2½ feet of water, traveled slowly and never turned a paddle at night. Each evening the soldiers camped on shore, the vessel being made fast by an anchor stuck in the river bank. The engine burned wood which was obtained at intervals



Dr. Stark and Indians photographed at Fort Mojave in the 60s. These are probably Pahute Indians who were visiting at the army post at the time this photograph was taken.

from piles along the shore. The Indians cut and stacked the wood and for their labors received \$4 to \$5 per month. The soldiers frequently had to disembark and walk around the sand bars upon which the steamers grounded.

When they reached Fort Yuma the thermometer stood at 92 degrees and the soldiers fresh from the cool climate of the San Francisco bay region suffered greatly from the heat. The men drilled ankle deep in the fine silt of the bottomlands and the wind stirred the dust into choking clouds. This place was called "Camp Dirty" by the men who were eager to get away from the vicinity and tangle with the Indians.

Finally marching orders were issued. All excess baggage, including tents, was to be left behind. Each soldier carried most of his belongings in a knapsack.

The men of the 6th Infantry were not green recruits. Many of them had been with Zach Taylor in Mexico in 1846-47. Afterward they had faced the Sioux and Cheyenne on the plains and in the summer of 1858 had marched overland to Salt Lake City and thence to California.

However, in spite of all this the trip north along the river was no child's play. Reveille at 3:30 in the morning day after day ceases to be fun even for veteran doughboys. The hot sun blistered them by day and at night they shivered with the cold. There were nights when the ice froze three-fourths of an inch thick in the water pails. Sand storms enveloped them as they plodded along the barren lands beside the river.

Guarded by Veteran Scouts

Two old mountain men, David McKenzie and the famous Joe Walker, were the guides. Occasionally the trail left the river and took to the mesa and the bare rocky hills. Mules began to give out but the men were too tough. Now and then Indian rancherias were passed. These were Chemehuevi villages and the people swarmed after the soldiers begging for old clothes. At one place on the west shore a correspondent reported: "Our route through the country has been impeded as they suppose by their medicine men who in many places have encircled the trail which we have traveled with magic rings among the sand and pebbles with grotesque forms of men and animals and figures impossible to describe."

These "grotesque figures" may well have been the giant intaglio pictographs of circles, men and animals scooped out of the pebbled benchlands still to be seen on the California bank 18.3 miles north of Blythe. The largest human figure in this group of three which I measured was 167 feet long with an armspread of 160 feet. The 23rd photographic section

at March Field, photographed these ground glyphs for the Los Angeles Museum in 1932.

On the afternoon of April 17 a party of Mojave came into camp to see Colonel Hoffman whom they called "Chief-of-the-tall-white-hat." He told them he would hold an official council with the headmen of the Mojave nation on April 23 near Beale's Crossing.

On the 20th the troops pitched camp on the east bank of the river in a grove of tall cottonwood trees. Here the grass was thick and luxuriant, fine for the famished mules. They were five miles north of the 35th Parallel and 198 miles north of Yuma. Two hundred yards away was the spot where the emigrant train had been attacked. Here were the broken wagons, the scattered debris of household goods, books, newspapers and the large cottonwood tree under which Alpha Brown had perished. The morning of the 23rd dawned clear but windy. A green brush ramada had been erected to keep off the rays of the sun and freshly cut cottonwood logs served as seats for officers and head men. By 9:45 a. m. 500 Indians were in and around the camp. At 10 o'clock Colonel Hoffman and his staff approached. There were six Mojave head men to act as spokesmen for their people. These were Irateba, Carook, Tomas, Carrion, Capitaran and one other. Cairook was garbed in an old shirt with a bell around his neck, beads, a knife and a pair of scissors. All of the Indians wore paint and feathers and were unarmed save for knives tucked unobtrusively in their loin clothes.

The Indians were nervous. They hawked and spat continuously and eyed the soldiers uneasily. The whole assembly was on edge and the soldiers were uncertain as to the temperament of their adversaries. Slowly, almost imperceptibly the blue coated troopers began to close in around the entire area with carbines ready:

Indians Are Suspicious

Some of the Indians on the outskirts noticed this encircling movement and began to creep stealthily away but were recalled to their places by orders from the chiefs when Colonel Hoffman explained that there was no danger.

It was a strange council. The American flag was formally hoisted for the first time to the accompaniment of music of fifes and drums and cheers of the soldiers. The Mojave had been warned that this was merely a custom of the white man and not intended to frighten the Indians.

None of the white men could speak Mojave. However, old Pascual, a Yuma headman, now friendly to the Americans, had come with the troops to act as orator for Hoffman. Pascual made a noble figure

as he stood there under the green roof of the sun shade garbed in a long red flannel hunting shirt girdled around the waist with a broad leather belt studded with brass tacks. His hair hung to the waist. He wore beads in his ears and a large pin and mother of pearl bead in his nose. His legs were covered with an old pair of pantaloons. Captain Benton of the soldiers translated Colonel Hoffman's speech into Spanish which was understood by Jose Maria, a Diegueno Indian who in turn was able to translate the Spanish into the Yuma tongue to Pascual. He in turn relayed the message in Mojave to the headmen of that nation. Probably never before in the history of the west was a council conducted in so many languages.

Hoffman bluntly told the Indians he had come to their country because he had heard they had killed some white men. He came in peace, but if they desired war he would fight them just as cheerfully. He desired to build a post in their country to protect the road. The Mojave were to keep the peace or be wiped out. They were not to molest white men traveling through Mojave country. Moreover, they must surrender the three head men who had been most guilty in the attack upon the emigrant train, in addition to hostages from the most important families.

Hostages Sent to Yuma

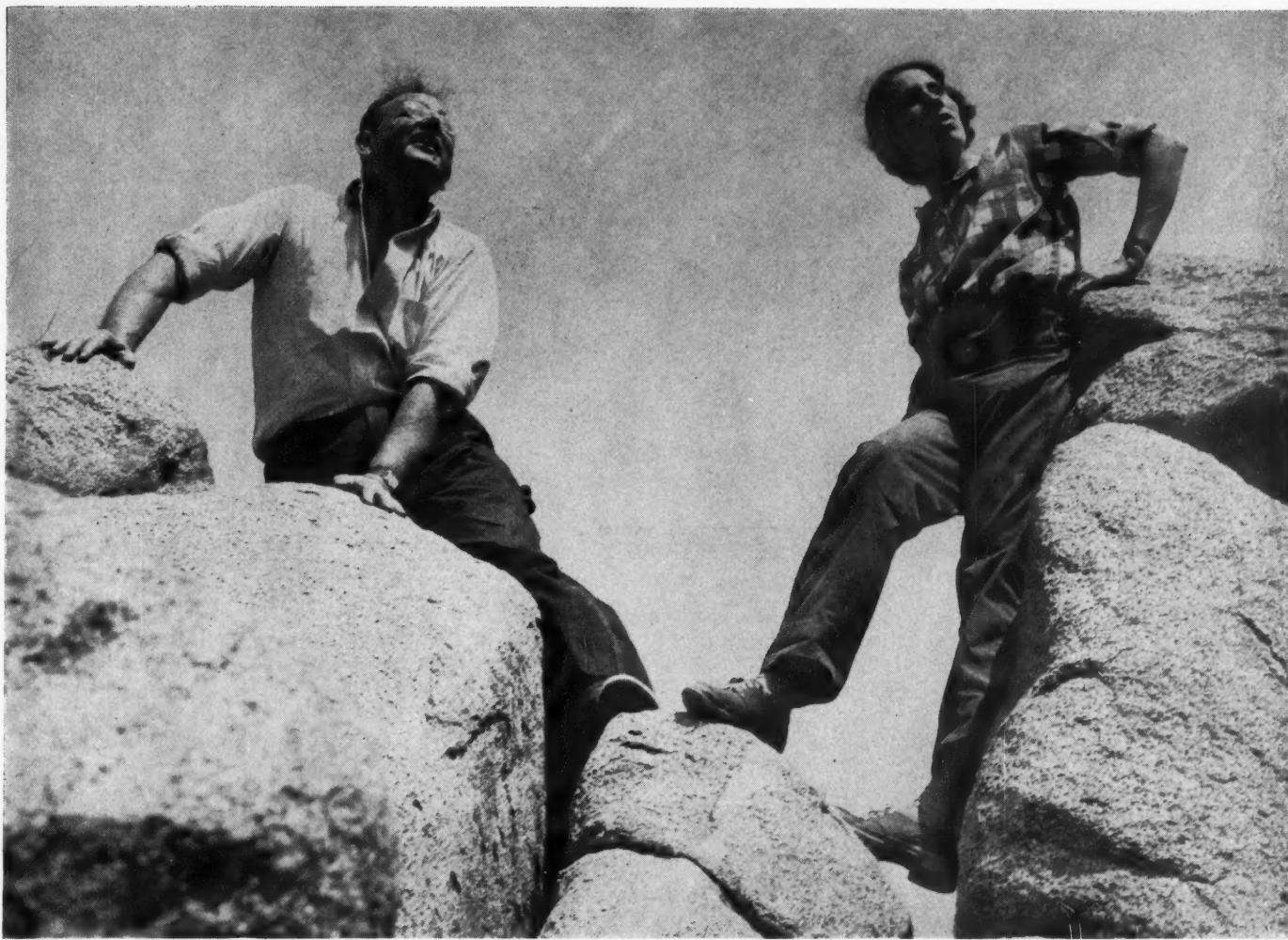
Pascual did not like to translate these terms but there was nothing he could do but carry out Hoffman's orders. The Mojave were downcast and humiliated. They acceded to all of the demands. The six chiefs voluntarily offered themselves as hostages. Cairook acknowledged that he had led the attack upon Hoffman's party when it came to survey the region for the site of the post in 1858. Nine hostages were accepted and sent down stream on the steamer in irons to Fort Yuma.

After the council the Indians remained around the camp to trade, and after several days' reconnaissance on both sides of the stream Colonel Hoffman finally selected a spot on the east bank of the river as the site of the post.

A correspondent present at the council and during the search for a suitable site said:

"At this crossing banks on the east side of the river are high, perpendicular and caving; whilst the west bank is low with lakes and ponds of water intervening between the river and the mountain side, over which the road to California crosses, making it at the time of overflow one vast marsh impassable for the mail or emigrant. There is not anything to justify a crossing at this place except it

Continued on page 34



Max and Elizabeth Lewis—two city dwellers who climb mountains for recreation.

To the Peak of White Mountain

By ELIZABETH LEWIS

DESERT mountains, rough and desolate, crowned by a peak once thought higher than Mt. Whitney. No roads, no forests, no lakes, no fish, no large animal life, no resorts, unposted trails. "Nobody ever goes there!" But for years, somehow the White mountains on the east side of Owens valley, California, intrigued my husband and me. From the Sierra we saw them, glowering across the way. From the Owens valley floor we saw them, wild and lonesome and high. In September last year we decided it was time to conquer White mountain peak (14,242 feet).

Nobody could tell us how far it was to the top, nobody knew which was the best route to follow. We started anyhow.

Our first attempt to climb the range was made from Laws, near Bishop. An old prospector told us of a road up Silver canyon which led over the ridge. It wasn't much of a road, but with the aid of a pick and shovel, removing slides and boulders from the path, we advanced 11 miles up the grade. Some of the turns were so steep it was necessary to unload our equipment to lighten the car. When we reached the 9,000-foot level a cloudburst stopped us. We camped where we were until the road dried out — and then discovered a little way ahead that the road was blocked by boulders we could not move.

We learned later that only one automobile had ever been driven to the top

Elizabeth and Max Lewis of Los Angeles wanted to get away from the beaten trails and try their mountaineering skill on a peak seldom visited by climbers. They selected the 14,242-foot summit of the White mountains on the edge of the Mojave desert as their goal. If you've ever climbed mountains you'll know the thrill these two city dwellers experienced when they finally reached the summit cairn at the top of the mountain after five days of gruelling toil over slippery rocks through fog and wind and snow.

of the ridge. That was a Stanley Steamer in 1909. We saw a rusted pitchfork and old horseshoes, souvenirs of the early days when mule teams freighted over this route.

It was evident we must find a different approach to our mountain. Backtracking over the road to Laws it was necessary to do more road building to repair the damage caused by the cloudburst the day before.

On the floor of Owens valley again, we revamped our plans. We would secure burros and make a direct assault on White mountain peak by way of Piute canyon. We were told of a dim ancient Indian trail that leads from the floor of

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the desert at Piute arroyo to the top of the ridge.

A rancher supplied the burros, four of them. And since the burros were to be important personalities on this expedition I will introduce them:

Jack, a homely grey fellow, with a pair of cab-horse blinkers on his rusty bridle.

Jinny, a pinkish-colored creature, with a habit of flopping down in the trail, pack and all, when she was tired.

Mama, a delicate dark grey burro, with huge ears, sad eyes, and a cute baby-face. The best worker of the three.

Satan, a sassy black nursling about six months, who was left loose to follow his mama, and spent his time trying to make mischief.

After a night disturbed by the baby burro's crashing in the underbrush around camp and trying to stampede the others, we rose in early morning moonlight, packed the animals, and were on the trail at 6:15. The little burro followed along for a few hours, then wearily turned toward home. After that we conscientiously milked the mother burro night and morning.

Up, and up, and up the Piute trail — a steep path of sliding scree. We had been told we would reach Sagehen springs, the first water, before noon. Lured on by the delusion that it was just "over the next hill," we climbed from our 5,500-foot base camp to an elevation of 10,000 in 12 miles (by later computation) before we reached the springs. And there, I assure you, we camped!

This climb was enlivened by Jinny's constant collapsing in the trail, and our heaving her to her feet by main force. The first 20 times we were sorry for her. After that we were sorry for ourselves. My husband Max finally decided it was time for stern measures. He gave Jinny a wallop with a rope and she sprang to her

Midwinter picture of White mountain peak on the eastern edge of the Mojave desert of California. Photo by Frasher's.

feet as light as thistledown — and never flopped again.

As we climbed out of Piute canyon a cold wind struck us—and we never really were warm again until we reached our base camp at the end of the hike. Our trail led over and around rocks—nothing but rocks. My diary says, "It is easy to understand why the White mountains are shunned by the crowd, in favor of the Sierra. There's nothing here. Just rocks, space and clear air—the primitive joy of isolation on the mountain."

Next morning we had some difficulty finding the trail out of Sagehen springs. Then came a long steep pull, with the animals getting tangled up, the packs coming undone and other minor annoyances.

As we approached the ridge at 11,500 feet the sky grew pitch black. As we crossed the saddle white pellets of icy snow began pelting down. It was a forbidding spot to be caught in a moun-

tain storm. But the Fates were kind to us. Unexpectedly we came to a green little meadow with a tiny mirror-like lake in the center. On one side was a stone hut. It had no roof but there was a fireplace and a huge pile of logs. In the face of such a storm as was threatening it was a haven indeed.

Hurriedly we unroped the packs, put up our tent and trekked around it, weighting the edges with stones. We were uncomfortably cold—but there was no time to build a fire until we had provided shelter against the storm.

Mama was bent on heading down the trail to find her missing offspring, and there was not a tree on the landscape to which she might be tethered. Max finally solved the problem by lugging up some huge boulders and wedging them together as a hitching post.

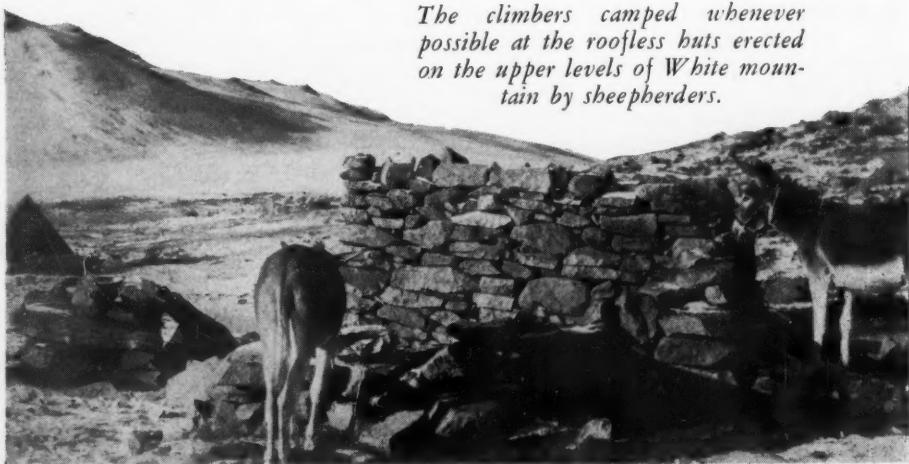
Our fireplace produced more smoke than heat, and we ate from our grub bag with numb fingers. The snowfall had become a blizzard and as soon as we had anchored our equipment with rocks we put on more sweaters and crawled into our sleeping bags.

My journal contains this entry: "We are nuts, but people who try to climb Mt. Everest, for instance, are nuts in a big way."

For three days we had freezing weather with snow every afternoon and night, but we were fortunate in finding shelters erected by the sheepherders, with wood and water. I do not know when these little roofless stone houses were built. None of them was occupied when we made the trip, but it is evident the mountain slopes have been used at certain seasons in past years for grazing purposes.

The trail was slippery, and often steep, but we were taking it in easy stages. Despite the hardships of such an adventure, there is a glorious sense of achievement that is compensation for the disagreeable moments. At times we were enveloped in fog. Then the clouds would roll back and the gorgeous panorama of the Sierra, capped with majestic Mt. Whitney,

The climbers camped whenever possible at the roofless huts erected on the upper levels of White mountain by sheepherders.



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would cause us to exclaim in wonder and admiration. Looking toward the opposite horizon we found beauty of a different character in the varicolored desert of Death Valley. Always our route was over rocks, sometimes covered with colorful lichens and occasionally embedded in tundra-like plateaus of grass and dwarf flowers.

Our final camp was just a few hundred feet below the summit. Clouds were swirling about us and we caught only an occasional glimpse of the jagged peak above. It was a wearisome journey up the shoulder of the mountain to that upper camp, nearly 14,000 feet above the desert plain. We crawled up the steep slope from boulder to boulder, unsure of our way, not daring to tarry, slipping and sliding with wet frozen feet over black rocks and white snow, dragging with numb fingers at the ropes of unwilling animals. There were moments when we doubted that we would make it.

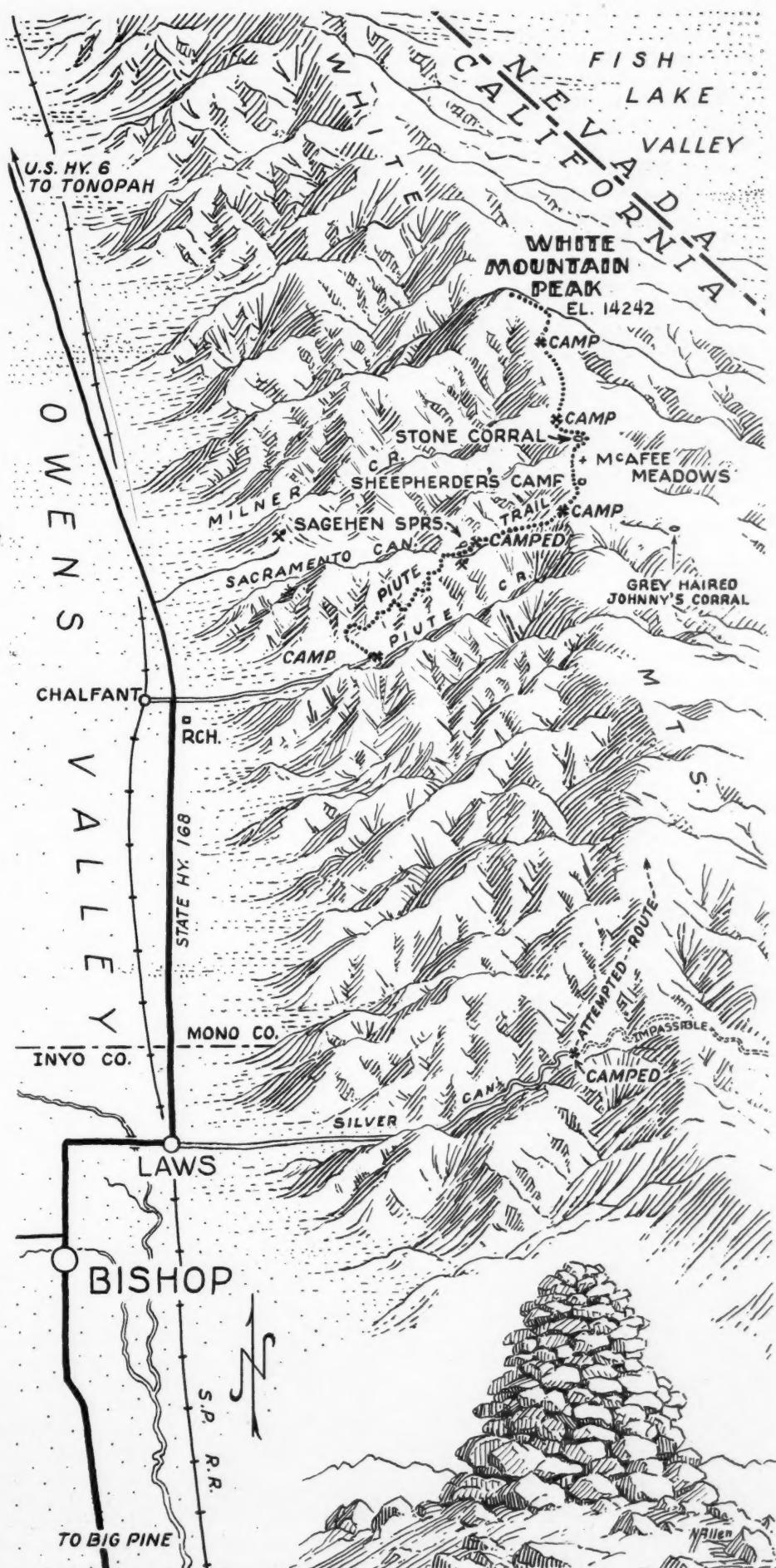
Late in the afternoon we reached a little bench and decided to camp. Then at sunset the clouds suddenly cleared away and revealed on the desert side of our mountain the most marvelous desert panorama I have ever seen. The air was clear and the reds and browns and yellows that extended away to the eastern horizon appeared newly washed and amazingly bright. We felt repaid for all our efforts.

We spent an uncomfortable night in camp. It was cold up there, and our clothes and the bedding were damp. Max suffered a slight attack of sickness. I hinted that perhaps we should not try to go on — and my suggestion was promptly vetoed. "We're going to the top of this mountain," he announced with a finality that left no room for debate.

Three hours after sunup we were signing the register at the top—and looking down on a magnificent world of mountains and desert. It is a glorious sensation to reach a hard-won summit. The toil of the trail is quickly forgotten in the exhilaration that comes with the achievement.

Before night we were back at the pretty little meadow with the miniature lake in its center. It was one of those balmy evenings when one can relax at the side of a crackling campfire and feel it is good to be alive.

One more day took us to the floor of the desert. We had walked over 50 miles and had each worn out a pair of stout new boots. We were burned by sun and snow and wind—but we had climbed to the summit of a comparatively unknown mountain, and we were glad we had made the trip.



Leading north from Barstow into the heart of the Mojave desert of California there's an old road that might properly be called the "trail of the water jars." There are few natural water holes along this route—and so Adrian Egbert, veteran keeper of a little supply station at Cave springs, has provided security for the travelers who pass that way by placing water-filled bottles at regular intervals along the trail. Here is the story of a true son of the great American desert.

Samaritan of Cave Springs

By WALTER FORD

"WATER—Don't Waste!"

This simple message is painted on the sides of wooden boxes stationed at regular intervals along the 65-mile trail that winds across the Mojave desert of California from Barstow to Cave springs near the southern edge of Death Valley.

And if the traveler is thirsty, or merely curious, he will find inside each of those boxes a glass bottle containing a gallon of pure drinking water—put there to allay the thirst of travelers who have been caught short in this remote desert region.

No one will ever know how much human suffering has been prevented by those water bottles, or how many lives have been saved—but thanks to the big heart of one of Mojave's grizzled desert rats, they have been maintained year after year without thought of remuneration.

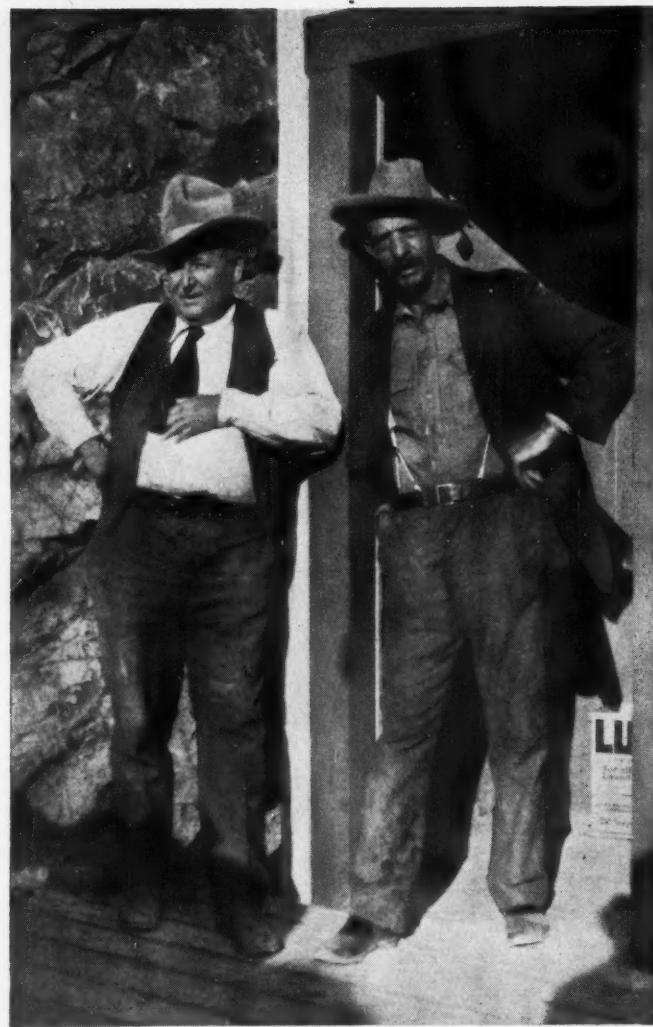
The good samaritan who keeps them there is Adrian Egbert, "Mayor" of Cave springs, veteran of 40-odd seasons in the arid wastes of the Death Valley region.

The Cave springs route in actual mileage is the most direct way into the south end of Death Valley. The old emigrant trail followed Cave springs wash this way. Over this same road traveled countless prospectors seeking their fortunes in the ranges surrounding Death Valley and in the gold fields of Nevada.

Paved highways now draw motorists into Death Valley by other routes, but Adrian Egbert and many of the prospectors still follow the old trail. Also, it is popular with those hardy motorists who prefer to explore the little-traveled byways of the desert country.

There are two natural watering places between Barstow and Cave springs—Garlic and Paradise springs. The span between Cave and Garlic springs is 29 miles—and that seems like a hundred miles on a sizzling midsummer day when the radiator is boiling and the canteen is empty.

To supplement these natural water holes, Egbert maintains six of his improvised water stations between Cave springs and Barstow. He formerly kept three additional water bottles on



Adrian Egbert (right) and his friend Death Valley Scotty at the doorway of Egbert's cabin at Cave springs.

the branch road between Garlic springs and Yermo, but these were discontinued a few years ago when he ceased to travel that route.

"Have the bottles been used often?" I asked Adrian.

"Yes, I have had to refill them many times," he replied. "I do not know how many travelers have used them because few of the users ever write to tell me about it. They sometimes scribble 'thanks' or 'good work' on the label, but that is all."

The bottles were put inside of boxes for protection, and yet that queer breed of humans that delights in shooting up road signs has more than once used the bottles as a target. And the one most frequently destroyed is the one farthest from water in either direction.

Along with the vandals who deliberately destroy the water bottles, whom Egbert condemns in no uncertain terms, are the travelers who use the water to fill their radiators. While at Cave springs I heard a tale of one such person who drove up and asked for more water for his car. Pasted on each bottle is the following notice: "Use what you need and when empty return to Cave springs where it will be re-filled and replaced. It may save a life." The motorist in question had read but had not heeded the notice.

"Where are the bottles?" asked Egbert.

"I left them there," was the reply.

"Well, sir, not a drop of water do you get until those bottles are brought in!"

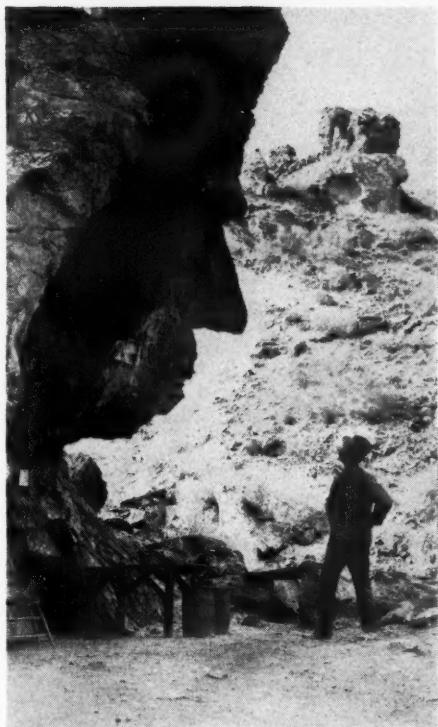
Harsh treatment? Perhaps. But Adrian Egbert knows the appalling suddenness with which agonizing thirst can over-

come one under a summer sun. He knows that a difference of one hour when water is needed can mean the difference between life and death, and he does not intend to let the stupidity of one person jeopardize the lives of those in need.

"Adrian," I asked, "you have seen hundreds of city drivers pass through here, you have helped many of them out of trouble—what are some of the mistakes they make in planning or making their trips into the desert?"

"The greatest mistake a novice desert driver makes is failing to acquaint himself with the character of the country into which he is going and to properly equip himself for the trip. If he owns two cars he will usually take the mechanically poorer one, equip it with old tires, and start out. A simple mechanical difficulty can assume tragic proportions on a little used desert road. My advice is to take the best equipment you have. And take an over-supply of water. You may not need it but it will always be there in case you do. And remember, hot-dog stands and gas stations are few and far between on the desert."

"A frequent source of trouble to the inexperienced desert driver," he continued, "is the breaking of the radiator hose



The "Stone Face" at Cave springs.

connection. He does not realize that due to the constant vibration over rough roads

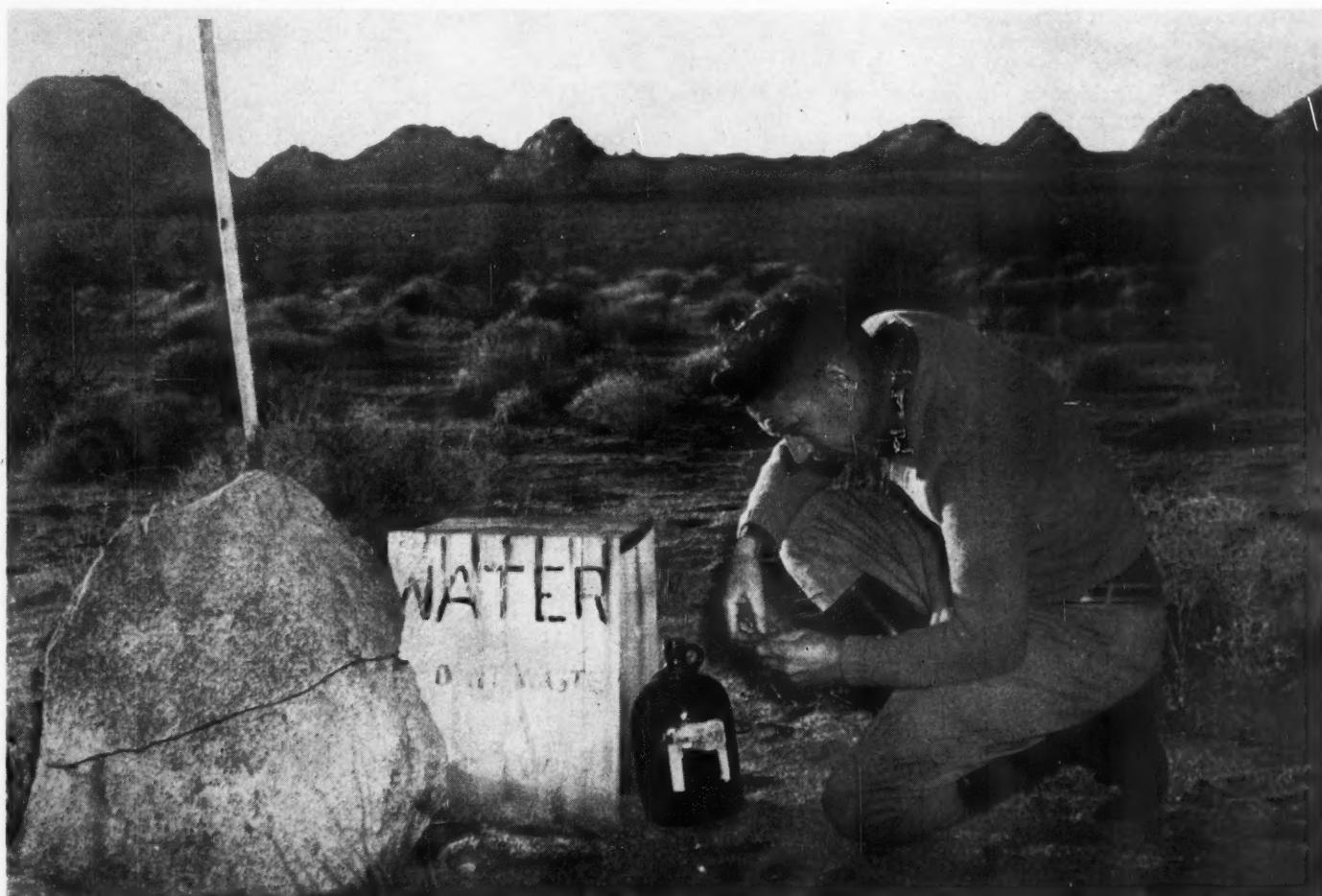
this is one of the most vulnerable parts of an automobile."

Not all of the travelers whom Egbert has helped out of difficulties have taken the trouble to show their appreciation. He told me of one occasion when he was awakened late at night by two young fellows who had broken their radiator hose five miles distant from Cave springs. They were tired and hungry. Adrian cooked a good meal for them, then provided a place for them to sleep. In the morning he found a radiator hose that would fit. "Now boys," he told them, "this did not cost very much but someone else may have the same trouble, so I wish you would send me another when you get home." He never heard from them again.

"Don't such experiences tend to make you sour on the human race?" I ventured.

"No! I'd do the same thing again tomorrow. I figure that I've done my part. That kind of fellows only hurt themselves." Such is the simple creed by which he aids his fellow men.

Egbert first saw the desert in the summer of 1894. Ill health forced him to quit college in the state of Washington so he bought a horse and saddle and rode down the Pacific coast. Eventually he



Walter Ford who wrote the accompanying story about Adrian Egbert is pictured here at one of water stations along the road to the Cave springs.



Panorama of Cave springs, remote water hole on the Mojave desert of California. The entrance to cave where the spring is located, and from which it derived its name is in the center of the picture. The ruins at the right are the remains of the stone huts of the prospectors who first located at these springs.

landed at Santa Paula where he disposed of his horse and journeyed to Los Angeles by train.

Jobs were scarce in Los Angeles and although Egbert was an expert carpenter, he found it difficult to obtain work even at the low wage of \$2.50 a day. In the city he met Frank McMasters, an unemployed train dispatcher, who agreed to accompany him to the desert to prospect. Both of them had found conditions in the city rather difficult and they reasoned that things could be little worse on the desert. Egbert had heard of a "lost" Amargosa mine and learned that an old man named Garcia who had discovered the mine was living in Los Angeles. They located Garcia after much difficulty and persuaded him to draw a map showing the location of the mine.

Egbert and his companion bought a team of horses, a wagon, and supplies and started out. Ten days later they arrived at Cave springs. With no previous desert experience they made the trip in one of Southern California's hottest summers.

At Cave springs they discovered they had lost the map Garcia had given them. From a hill above Cave springs they could see water flowing in a river which Egbert correctly concluded was the Amargosa. A cloud-burst near Tecopa had filled the usually dry river bed from bank to bank. In traveling down the Cave springs wash they had their first streak of hard luck — the breaking of their wagon tongue. After making a temporary repair with wire they proceeded cautiously down the wash to the

bank of the Amargosa river where they made camp for the night.

Adrian laughs when he tells of their first night in Death Valley. "We were camped under a full moon but I noticed that it was gradually growing darker. Suddenly I looked up. 'Frank!' I called, 'take a look at the moon—see anything funny?'

"I sure do!"

"Then I'm not crazy!"

"By the light of a lantern we looked at an almanac and discovered that a total eclipse was on."

The next day Egbert and his companion moved over to Saratoga springs with the intention of setting up camp and repairing the broken wagon tongue but there they ran into new difficulties. They had barely settled at their new location when Jim Dayton, a teamster, drove up.

"You boys can't stay here," he told them. "The water will give you fever and you will lose all desire to move. Better go on up to Ibex springs — there's good water up there. Just follow those two wagon tracks."

Their stay at Ibex springs was just long enough for Egbert to build a forge and make a permanent repair on the wagon tongue. They were soon on their way to find the mine whose fabulous wealth promised a life of ease for the rest of their days.

Following the original discovery of the Amargosa mine many attempts had been made to work it, but in every case the miners were driven off by hostile Indians. In 1865 a party of Americans disregarding the threats of the Indians tried to operate it. Five of the seven men in the

party were killed by the Indians. The two survivors hid in a tunnel and made their escape under cover of darkness. Later they returned with a posse and buried the dead. When Egbert and McMasters reached the mine in 1894 the graves were still plainly visible.

After working the mine for a time Egbert decided it wasn't worth the effort. Their returns were too meager, so they abandoned it and moved to more promising fields.

A record of Egbert's wandering over the desert region from the time he first made its acquaintance would fill many more pages than could be allotted in any one issue of the Desert Magazine. The years of 1917 and 1918 found him in the government service at Phoenix, Arizona, under Captain Tom Rynning, now deputy U. S. marshal at San Diego, California. His subsequent travels brought him to Cave springs many times but it was not until 1925 that he took up his permanent residence there.

When Egbert moved to the springs, Barstow was the last outpost for supplies for Death Valley travelers. Egbert sensed the need of having them available at Cave springs and put in a stock of groceries, gas, and oil. His customers have been few but paradoxically his returns have been great. Not in a monetary sense, but in the deep satisfaction he gets from rendering a service to those in need. Motorists who have made the long hard pull up Cave springs wash with a dwindling supply of gas will long remember the relief and assurance embodied in his brief sign, "Gas and Oil."

Not all of Egbert's efforts have been

confined to helping motorists out of trouble. Prospectors whose fortunes and food supplies reached bottom simultaneously have usually found a helping hand at Cave springs. Mrs. Sweetman, a relative of Egbert's who also resides at the springs, told a story of one such case which had an amusing and rather unexpected ending.

"An old prospector would stop periodically for supplies," she related, "and knowing that he was having a tough time making a go of it, Adrian would usually total up the bill and then cut it in half. On one occasion when he came through, instead of ordering the usual staple supplies he included olives, canned fruits, and a variety of delicacies not ordinarily found on the desert miner's fare. Adrian looked surprised but said nothing. When he totaled up the bill he told the old fellow what it was, and then added that he would charge just half price. 'Nothing doing!' the old fellow exclaimed, 'I pay my bills!' Reaching into his pocket he pulled out a roll of currency as large as his fist. He had just sold one of his claims for \$3000.00."

Egbert places the first occupancy of Cave springs around 1850 when two prospectors discovered the spring and attempted unsuccessfully to set up placer mining operations. Egbert summed up their failure with characteristic philosophy. "If you go out and find hickory nuts on the ground," he stated, "you know there's a hickory tree close by. It's the same way with placer mining — there must be placer gravel."

In common with the true desert spirit, Adrian Egbert loves the wildlife of the desert and is bitter in his denunciation of those who would destroy it. He has established his own game refuge in the Cave springs area and his "No Hunting" signs prominently placed at the boundaries indicate that his wishes will be enforced. His efforts have not been in vain. One of his chief sources of pride, and one which he delights in showing visitors, is the flock of quail which daily answers his call to get the food he scatters near his cabin.

Adrian is always pleased when visitors stop for a chat but he does not advise making the trip to Cave springs during the heat of the summer, when the temperature along the route may reach as high as 130 degrees. Hardened as he is to the desert sun, he wisely retreats to his caves during the heat of the day where the relatively cool temperature of 75 degrees prevails. During the temperate months of the year the trip assures a two-fold treat—desert vistas that are just a bit out of the ordinary and the opportunity of meeting a real desert personality—Adrian Egbert, the samaritan of Cave springs.

DESERT QUIZ

Here is another list of brain-twisters for the Desert Quiz fans. They cover the whole range of desert subjects—geography, mineralogy, botany, history, and lore of the tribesmen. If you can answer 10 of them correctly you are a well-informed student of the desert. Those who can give 15 proper answers are eligible for membership in that very exclusive fraternity known as "Desert Rats." And if you exceed 15 you are qualified to put in your application for the honorary degree of S. D. S.—Sand Dune Sage. *Answers on page 42.*

- 1—Ubehebe crater is located near—
Flagstaff..... Valley of Fire.....
Death Valley..... Great Salt Lake.....
- 2—The Nolina plant often is mistaken for—
Catsclaw..... Squaw bush..... Juniper..... Yucca.....
- 3—"Slip" is the name of a material used by the Indians in making—
Pottery..... Blankets..... Baskets..... Dolls.....
- 4—Dinosaur National monument is located in—
Nevada..... Utah..... Arizona..... Colorado.....
- 5—Weaving is done by the men in the Pueblo tribe of—
Zuni..... Acoma..... Taos..... Hopi.....
- 6—The Mohr scale is used in measuring the—
Purity of gold..... Hardness of minerals.....
Age of a tree..... Velocity of a river.....
- 7—The most widely known character in the "Lincoln County War" of New Mexico was—
Wyatt Earp..... Ike Clanton.....
Billy the Kid..... Geronimo.....
- 8—The locale of Harold Bell Wright's "Winning of Barbara Worth" was—
Imperial Valley..... Salt River Valley.....
Mojave desert..... Sevier desert.....
- 9—San Xavier del Bac is a mission at—
Nogales..... Santa Fe..... El Paso..... Tucson.....
- 10—The piki made by the Hopi Indians is a—
Drink..... Food..... Medicine..... Antidote for snake bites.....
- 11—According to legend, he who drinks of the water of the Hassayampa river in Arizona will—
Have eternal youth..... Never suffer from rheumatism.....
Find a bag of gold at the end of the rainbow.....
Never again tell the truth.....
- 12—Boulder dam was erected primarily to—
Generate electricity.....
Provide irrigation water for new lands.....
Control the flood waters of the Colorado river.....
Provide additional water supply for Los Angeles.....
- 13—Generally speaking, the rock formation of Painted Desert of Arizona is—
Sandstone..... Limestone..... Lava..... Granite.....
- 14—Hohokam is the name given the ancient people who once occupied—
Grand Canyon..... Escalante desert.....
Southern Nevada..... Salt River Valley.....
- 15—Prospectors seeking the "Lost Dutchman" mine in Arizona go to the—
San Francisco mountains..... White mountains.....
Harqua Hala mountains..... Superstition mountains.....
- 16—Tombstone became a famous camp for the mining of—
Copper..... Silver..... Gold..... Tungsten.....
- 17—The gem crystal sometimes sold as "smoky topaz" is in reality a cloudy type of—
Calcite..... Quartz..... Feldspar..... Gypsum.....
- 18—The estimated span of life of the Saguaro cactus is approximately—
50 years..... 200 years..... 500 years..... 1000 years.....
- 19—The Casa Grande ruins of Arizona are located nearest—
Casa Grande..... Coolidge..... Tucson..... Florence.....
- 20—A national monument is established by—
Presidential order..... Act of Congress.....
Secretary of Interior..... Petition of state legislature.....



Chief Joe Sekakuku was born on the Second Mesa. Members of his family are the hereditary rulers of all the Hopi and Joe is the oldest son. He was educated at Sherman institute and at an eastern university. He was in the service of the Fred Harvey organization at Grand Canyon as an entertainer for 15 years. Since then he has acquired curio stores at Flagstaff and on the Second Mesa. Generally he is an exhibitor at the major fairs and entertains with Hopi songs and dances.

"ONLY once have my people lighted the fires of war, and then they were against our own tribesmen."

Chief Joe Sekakuku, hereditary chief of all the Hopi Indians was home on the Second Mesa where he had taken part in the Snake Dance of his clan. The dance was over, visitors had scattered to the four corners of the earth and we were talking about the future of his people. This year the rain gods had forsaken his land and the fields lay barren and brown in the morning light.

"My people will be hungry this winter I fear, even the sweet corn has failed us for the first time since Singing Houses was destroyed!"

"Singing Houses?" I was puzzled at that name being mentioned in connection with the drought. It had been more than 200 years since Awatobi (Singing Houses) was destroyed by the Hopis in their only warlike journey against their own people.

"Yes, you see when the Singing Houses was destroyed by our people because of the wickedness there, a fine grower of sweet corn was brought from the survivors to the Second Mesa. And since then our villages here have never been without a surplus of the small sweet ears of corn. Last winter, however, so great was the need of flour and sugar and coffee that all this corn was taken to the trader for exchange and now the corn rooms are bare."

It seemed strange to hear Chief Joe discuss the ancient beliefs and legends of the Hopi people. I have known him for many years as an unusually intelligent Hopi who is hardly

When the Hopi Indians of ancient Awatobi turned from their traditional gods and became haughty and sinful, the tribesmen from the other mesas trapped them in their kivas and destroyed them. Here is the story of the only time in history when the Hopi went to war against their own people.

When the Hopi Deserted Their Ancient Gods

As told to MRS. WHITE MOUNTAIN SMITH
by CHIEF JOE SEKAKUKU

less conversant with the language and thought of the white man than of his own people. At Grand Canyon where he was long employed he associated constantly with important people of the Anglo-American race. He danced with them, dined with them, and discussed the questions of the day with them.

But every other year when the Snake dance was held in his native village he turned back toward the Second Mesa and followed the trail across the Painted desert to pray his father's prayers for rain with venomous snakes dangling from his lips.

"Why do you come back and take part in this pagan ceremony?"

"Why does a wounded dog creep home to die, or a tired child turn homeward when darkness falls? We Indians are only visitors in your white world. We amuse you and you feed and clothe us. But when the Rain Gods call or we feel that the end of the trail is near, we are Indians, going back to our own people to die as our fathers died and be buried as they were buried. The white veneer is very thin!"

"You spoke of the one time your people made war. Tell me about it!"

"Your road leads close to the ruins of the Singing Houses," he answered. "I'll ride with you and when we reach that place I will tell you the story!"

We drove down the steep hill past the ancient burial ground to where the Corn Rock stands sentinel—like at the head of the trail. When this towering stone topples, according to Hopi legend, the destiny of the Hopi people topples with it. We followed along the mesa to Keam's canyon and then six miles across the desert to a hill almost buried with drift sand.

Chief Joe pointed out the walled up water hole under the hill where the ground is littered with bits of pottery shaped and painted by the Hopi women 300 years ago and carried by them to this water hole where all the women assembled in the morning hours to gossip and exchange news.

Joe looked back across the canyon to where the Hopi mesas were etched against the sky, and I looked at Joe. Tall, for a Hopi, muscular, without an ounce of surplus fat he still reminded me of the college boy he was when I first met him. Now, as then, he wears his thick black hair bound with a scarlet kerchief, his shirt is green velvet trimmed with silver buttons and around his neck is a magnificent wedding neck-

lace studded with turquoise. The turquoise earrings dangling from his ears would have made a collector envious. For the moment he is all Indian.

"Here," he said, "in the year 1540 the Spaniards first saw a Hopi village. They sneaked in under the walls of the town in the hours of darkness led by Zuni guides. They lay so close they could hear the women chattering as they visited back and forth from their housetops. Next morning these strange soldiers mounted on strange and terrifying animals lined up and ordered the Hopis to bring out all their gold and jewels for a Spanish king."

"The Hopi had never seen horses and were frightened. But their men went out to die defending their homes. Some of them were run down and killed by the horses and others were cut in pieces with Spanish swords. The rest surrendered and brought out their only treasures—ground corn and cured skins and hand woven shawls made from wild cotton. Then the soldiers went away and left the Hopi alone for a long time. My people have no written history you know, and our legends are told by the older people to the young ones. That is how we know those things of the past, I guess it was about

50 years before more Spanish soldiers came. They didn't remain long and then after another 50 years some more came and stayed.

"They brought 'long coats' (priests) with them. They said the Hopi were wicked and godless Indians so they built a great church in the middle of the village. See, here are the walls of it yet!"

"Yes, Joe, and there is a kiva under the church. Those paintings are as brilliant as if they were put there last week instead of 300 years ago. Why is the kiva there under the church?"

"My people say the priests did not know the kiva was there, and that the Hopi went into it and held their tribal ceremonies just the same as though the mission wasn't above it. It must have been a good joke on those 'long coats.'

"Well, my people say the priests made the Hopi men go across the desert to the San Francisco mountains and carry heavy pine trunks here to roof this mission. Sometimes it would take 40 or 50 men to lift and carry the timbers. Every woman and child had to bring stones and baskets of mud to help build the church. They wanted none of the priest's strange religion, but the children were brought into the mis-



This reconstructed pueblo by Dr. Carl Russell shows the life of the Hopi Indians at the time they were first visited by the Spaniards, about 1540. In recent years the

Peabody institute has been excavating and studying the ruins of Awatobi for scientific purposes. Photograph published through the courtesy of Milwaukee Public Museum.

sion from their play and made to learn strange words and sing-song them for hours at a time.

"The priests burned a witch powder in a shining ball and swung it around and around until all the Hopi were bewitched with it, and soon they were as arrogant and untrustworthy as the priests themselves.

"They grew very rich and haughty because the prayers of those strange men made plenty of rain fall on this valley. The Awatobi Hopi so far forgot themselves as to neglect dancing with our snake brothers. Instead they sat inside the church and hummed until the other Hopi villages called this place Singing Houses, and all the other Hopi hated the Singing House people because of their wealth and their haughty ways. Why, men from our mesa dared not bring home game from the hunt because Awatobi Hopi waylaid them and stole their meat. Our women dared not go far from the Second Mesa in search of material for baskets or to gather the green plants we Hopi like to eat, because Awatobi men kidnapped them and took them to that wicked town to live. It is true that there was some good Hopi left because these loyal Indians distrusted and poisoned one of the evil ones and killed two or three more in the uprising against the Spaniards in 1670. But on the whole the other Hopi people thought very little of Awatobi dwellers.

"Awatobi Must be Destroyed"

"At last all the other villages held a great meeting and it was decided to destroy Awatobi. All the warriors from the three mesas gathered beside that walled water hole I showed you and when the moon rose they crept close to the door of the walled town. Someone inside opened it for them and they went in and were all over the village before they were discovered. Fires were still burning in the little mud ovens in the plaza because the next day was to be a feast day, and the women had worked late cooking bread and roasts. In the kiva under the church Awatobi men were gathered holding a special ceremony. In another kiva on the edge of the plaza nearly 100 Hopi were chanting. Into this kiva the invaders threw cedar bark torches and pepper pots from the houses and then fastened shut the trap door so those men smothered and perished. Nearly all the men of Awatobi were killed.

"The women and children were distributed among the other villages. My village, as I told you, was lucky enough to get a woman who knew all about growing the little sweet ears of corn. She taught others and we always have nice corn—that is, when it rains! A skilled peach grower went into Oraibi and their peaches are very fine to this day. Walpi drew a Snake priestess who taught them many things about the Snake dance. People say that Walpi has the most effective Snake dance. I think, of course, that the one in my village is best."

Chief Joe looked so complacent I couldn't resist teasing him a little. "Tell me, Joe, why you can dance with rattlesnakes in your mouth and let them crawl all over you, and yet when you sat beside me at Walpi and a rattler came toward us, you upset me and got on the highest rock you could find?"

"Why, Mrs. Smith, those were strange snakes. I had never seen them before and they were not acquainted with me either. They didn't know I am their Snake brother!"

"O, I didn't understand. I naturally thought a rattlesnake was a rattlesnake whatever mesa it happened to be on!"

Joe changed the subject.

"As I said, every man here in this village was killed. The priests were killed and the women and children carried away. Nobody ever came here to live again, and there must have been a curse on this valley because it never has been green with corn or red with peppers since that year, no matter how



Above—Ruins of Awatobi as they appear today.

Below—Archaeologists excavating at Awatobi to learn more about these ancient people find many artifacts in the graves.

hard the Hopi work to raise a crop here." He pointed to a heavy cloud gathering close to ancient Walpi.

"See! The rain is falling there on the fields of the good Hopi. They have never failed to dance with snakes and pray for rain. These Singing Houses Hopi forgot their own gods and that is why their town is a ruin and their fields burned and barren."



Gnomes of the Desert Night

By GRACE P. NICKERSON

AMONG the prettiest and most charming of desert creatures are the Dipodomys; beautiful, nocturnal kangaroo-like little animals which leap and bound about in the desert sands, balancing themselves with their long, long tails and holding their tiny forelegs so close to their bodies that they are scarcely noticeable.

Although only the long strong hind legs and large feet are used when traveling any distance, the tiny front feet are most useful. They are used as hands, with lightning like speed, in filling their large cheek pouches which open externally. Frank Stephens in his book "California Mammals" says, "The filling is done so rapidly that when hard grain like wheat is used, a continuous rattling sound is made."

As I watch them gathering food placed on a smooth surface, the kernels disappear as if gathered by vacuum. In a

squatted position they will glide up to and seemingly over a grain, but as they pass on, the grain has disappeared. When filling their cheek pouches, they seldom take time to eat.

The capacity of the two pouches is a little more than a tablespoonful, enough for a whole day's ration.

In emptying their pouches, the fore feet are again used; each foot making two or three quick forward squeezing movements, and the pouches are empty.

They are comical looking little creatures, with bulging cheek pouches and queer shaped heads as they go leaping away to store the grain they have gathered. Their long tails streaming behind them seem to wave a graceful farewell with each leap.

Lately, I have heard some strange stories of queer, shadowy, little desert gnomes which may be seen just at sunset if you go into the desert and sit very

Folks who go in for scientific names call them Dipodomys. But to you and me they are just plain kangaroo rats. They are graceful little creatures that hide in their burrows by day and skip around over the sands on their powerful hind legs at night. They are harmless rodents—and do not deserve the ill-repute commonly implied by the name "rat."

quietly. Inasmuch as sunset is the time when the Dipodomys start out on their nightly carnivals and travel about in an upright position, they may truthfully be described as gnome-like. Their satiny, smooth fur of buff and white appears shadowy in a dim light and their movements are so quick that only the fastest shutter and film can photograph them; so I am inclined to believe that it is the Dipodomys that the quiet observers have seen.

Very little has been written about the Dipodomys. Perhaps two unpopular words, rat and rodent, applied to the small creatures have deterred interest in them. True, they are rodents and commonly called kangaroo rats. However, the word rodent simply means they belong to an order of mammals having two larger incisor teeth in each jaw, separated from the molar teeth by an empty space; a most necessary arrangement to their mode of life. The squirrel, marmot, muskrat and beaver all belong to the Rodentia.

The word, rat, brings to mind the de-
Continued on page 33

In a Garden



Photograph by Russ Clark, Phoenix

INDIAN BOWL

BY ANN BUELL STARK
Seattle, Washington

How patiently have old, brown hands
With wet clay wrought to form this bowl;
And painted it with glowing hues,—
A chalice holding desert's soul.

DESERT MOONLIGHT

BY DORA TUCKER
Las Vegas, Nevada

A night bird's plaintive cry,
As it seeks its desert home,
Soft zephyrs passing by
Like spirits that ever roam.

And darting to and fro,
The black bat on the wing,
A coyote's wailing call
From the hill by the hidden spring.

There's a rustle of withered leaves,
As a pack rat scurries along,
And a great horned owl above,
Booms out like a heathen gong.

Like sentinels brave and grand,
Guarding my lonely camp,
The proud saguaro stands
With the moon for a magic lamp.

The sky is a cobalt bowl,
Encrusted with jewel stars,
And my soul is lifted up
Freed from its prison bars.

You, city born and bred,
Where streets are a glare of light,
Can never know the thrill
Of a moonlit desert night.

(Dedicated to The Reverend Taylor of
All Saint's Church, Salome, Arizona.)

BY LOIS ELDER STEINER
Phoenix, Arizona

Today I stood in silence;
Language mattered not . . .
My heart reverberating deep within
At a miracle a man of God had wrought.
Within a garden, heaven. Just beyond
The desert; grim—forbidding—grey.
Reverently I touched a rosebud;
Breathed the perfume from an orange spray.

I think I saw God's shadow
Move across the white church wall.
Kneeling there beside ranunculus
I watched another shadow fall.
And looking up the Reverend smiled
And led the way
To a bed of Darwin tulips
Nodding gently—colorful and gay.

Oh, would that I had magic
In my hand!
A million words from which to choose
At my command!
I'd write a theme so beautiful
'Twould hurt the heart to read.
A theme devoid of avarice—all hatred
And all greed.

A "preacher" people call him . . .
But when his sermon's done
He kneels among his flowers
In clean sand out in the sun.
In a garden Jesus knelt;
Talked with God into the dawn.
In a desert sharing blossoms
His disciple follows on.

MOUNTAIN RHAPSODY

BY EVA CARPENTER IVERSEN
Encinitas, California

God's stars are far above me,
His earth beneath my feet,
And the wind blowing through the passes
Is clean, and pure, and sweet.

God's desert lies before me,
His mountains tower all 'round.
In perfect peace He reigns.
I tread His Holy Ground.

BONDAGE

BY MRS. O. C. BARNES
Los Angeles, California

I'd heard and read of the desert waste,
And often I'd wondered why
There could be room for so fearful a place
Beneath so gorgeous a sky.

But now that I know this barren land
This "desert of death," so to speak
I regret the day that I cast my lot
With the milling throng on the street.

DESERT CREED

BY JUNE LE MERT PAXTON

The thunder-god was raging mad;
And with black clouds the skies he
clad.
Then, with a sweeping rush and
roar
He thoroughly cleaned the desert
floor.

MOUNT SAN JACINTO

BY WILLARD S. WOOD
Pasadena, California

I have known seas that perished at my feet.
Come to my bosom from your roaring street,
So shall I teach you by some murmuring
stream,
How frail a web the fabric of your dream.

TRANSFORMATION

BY THELMA IRELAND
McGill, Nevada

That mountain peak looks drab and bleak,
But when the sun sets on it,
She wears a purple velvet cape
And dons a crimson bonnet.

DESERT'S HEART

BY CLINTON RINGGO HULL
Covina, California

My home is far off in the desert,
On a lonely homestead claim,
Where my nearest neighbor is miles away,
And the sun's like a naked flame.

Where the prairie dog and chipmunk
Are the friends of my solitude,
And the coyote's haunting melody
My musical interlude.

Or the shriek of the raging wind,
As it howls and roars aloud,
To lift and hurl the drifting dust
In a blinding, choking cloud.

But God, how I love the desert!
With its shimmering sage and sand.
For I know each throb of the mighty heart
That beats in that lonesome land.



TOLERANCE

'Feel' of the Desert

By JOHN STEWART MacCLARY

Photograph by WM. M. PENNINGTON

SOPHISTICATED white people who condemn that which they cannot understand often refer to the Navajo as pagan.

Consider the Navajo point of view: Palefaced strangers invaded his ancestral domain, bringing religious doctrines wholly foreign to his traditional teachings. During uncounted generations the Navajo had found spiritual comfort in his ancient faith, worshiping the powers of Nature. The white man offered new teachings under the banners of various denominations.

The Navajo could not understand, but he was tolerant. He had learned from his desert environment the folly of violent resistance. And so, this Pennington picture of an aged Navajo personifies Tolerance. It is a virtue that has suffered in the world outside.



The Pahute would empty his gun and then turn and run while he was reloading

Trail of a Renegade Pahute

For nearly three years the Indian outlaw Mouse terrorized isolated ranchers and miners in southern Nevada, and then a posse was formed to end the career of this Pahute killer. That was 40 years ago. Much of the region where the Indian carried on his depredations is now covered by the waters of Lake Mead—but the thrilling incidents of that period are still fresh in the memory of old-timers living there. George Perkins, who wrote the accompanying story for the Desert Magazine, was one of the leaders of the posse which finally caught up with the renegade—and dealt with him according to the rules of the frontier.

By GEORGE E. PERKINS

My first acquaintance with the Pahute outlaw, Mouse, was during the winter of 1898 when I was working for Daniel Bonelli who operated a ferry on the Colorado river near the junction of the Virgin.

Bonelli also had an alfalfa ranch in the river bottom and supplied hay to the mining camps of White Hills, Arizona and Eldorado canyon, Nevada, and to travelers who followed this old trail across the desert.

He employed a crew of men to operate the ferry and ranch, and among them were several Indians, mostly Pahutes. The Indians were good hands for both the ferry and ranch as they were acclimated

to the 120-degree summer temperatures.

Mouse was an industrious worker, but he was feared and hated by the other Indians. It was characteristic of the Pahutes to become sullen and brood for days over a fancied wrong. In this frame of mind they sometimes became killers and had been known to vent their wrath on whites and friendly members of their own tribe.

On such occasions a posse would immediately take the trail and when the murderer was captured he would be dealt with according to the custom of the country, and buried on the spot.

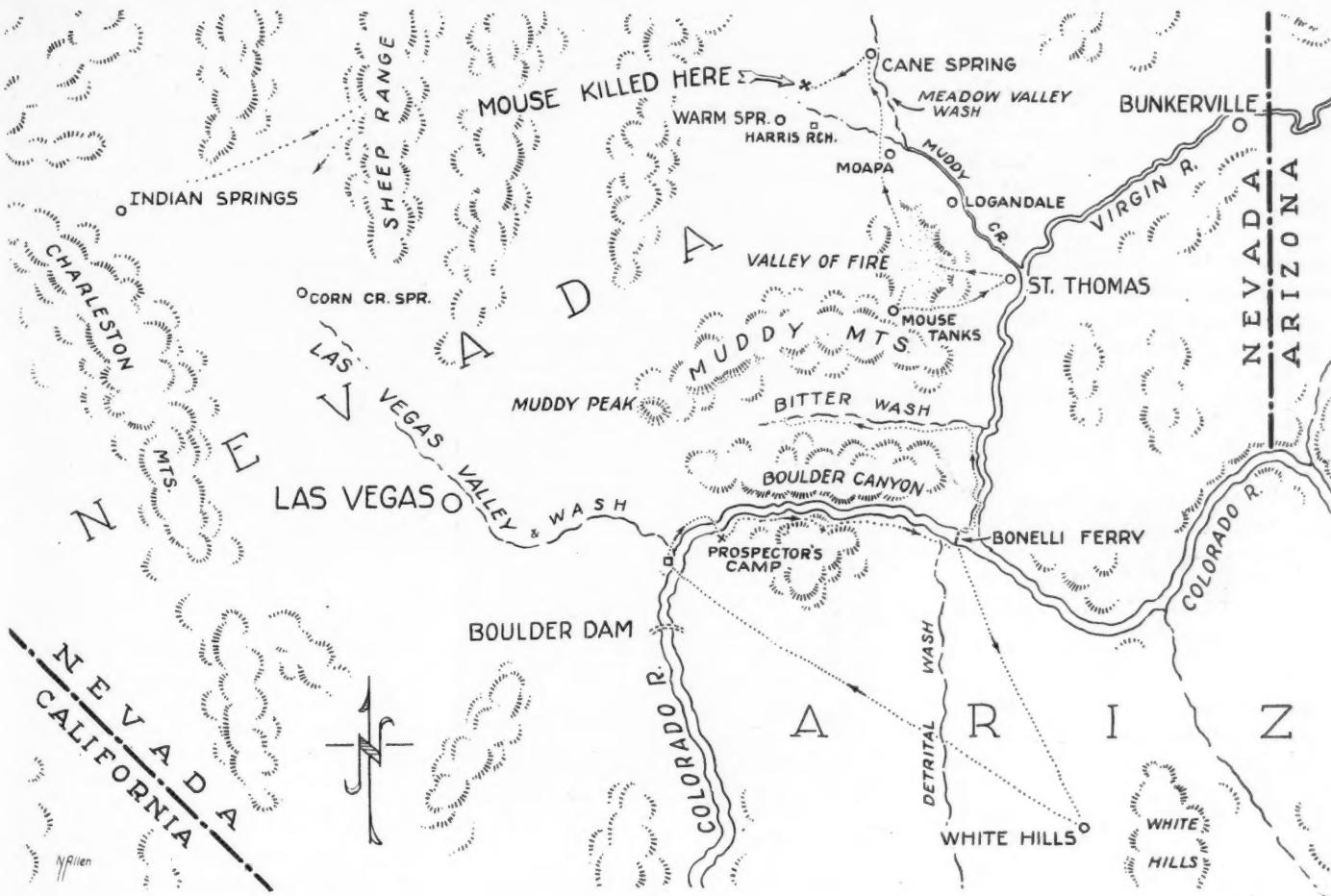
Mouse was an Indian of this type. The Pahutes had given him his name because

they regarded him as sly and cunning. They avoided him as much as possible.

One evening several excited Indians came to the ranch house and reported that Mouse had gone loco and was shooting up their camp with an old 45-Colt six-shooter. They were badly frightened and admitted there had been some liquor in their camp that night.

Indians and liquor always meant trouble, and several of the white men at the ranch volunteered to go immediately and disarm the Pahute.

Mouse was sullen and quite evidently resented the intrusion of the white men. We were armed, however, and he reluctantly gave up his gun. The other In-



dians were so scared they would not return to their camp that night.

Next morning Bonelli discharged Mouse and we took him across the river and put him ashore on the Arizona side. Mouse had little to say but in his heart was all the bitterness of a vengeful Indian killer, as was disclosed by subsequent events.

From Bonelli's he rode a cayuse pony to the White Hills mining camp 35 miles south. There he worked for a few months as chore boy and general handy man at the company's store and was getting along very well until one evening he went berserk again. He stole a 30-30 rifle and cartridges from the store, took a horse belonging to a freighter and headed back toward Nevada. From that day until his death 2½ years later he was a fugitive.

Details of some of the atrocities committed during his outlaw career did not become known until many months after the events had taken place, but for the purposes of this narrative they will be given in their chronological order.

From White Hills camp his trail followed almost an airline through the mountains toward Las Vegas ranch. He reached the Colorado river opposite the mouth of Las Vegas wash, about five miles upstream from the present site of Boulder dam. Here his horse became

mired in the quicksand on the Nevada side and he left it to die a slow death by starvation.

Then he started up the river toward Bonelli's, 25 miles away. Less than a mile upstream he came to the camp of three prospectors, two young men named Stearns and Davis, and Major Greenowat, nearly 80 years of age. They had been panning the bars in the river for placer gold.

Their camp was across on the Arizona side of the river. Mouse spied them from the Nevada side and when he hailed them they crossed in their boat and brought him to their camp. They fed him and invited him to remain for the night.

During the evening the Pahute told them he knew the location of a rich gold ledge 10 miles up the river, and would take them there the next day. They were elated at the prospect and as the country was rough it was decided Davis and Stearns should go with the Indian while the major remained in camp.

* * *

Two days later at Bonelli's ferry one of the ranch hands discovered that a horse had disappeared during the night, one of a matched span of greys recently purchased from an Oregon trader. As the work stock occasionally wandered off from the ranch nothing was thought of

the incident until it was discovered that a bridle also was missing.

The Indians immediately sensed something was wrong and began looking for tracks. The trail was plain. The thief had led the animal to the banks of the Virgin river and then mounted him and ridden into the river. A mile upstream the tracks were picked up again, coming out of the water.

Joe F. Perkins, the ranch foreman, and one of the Indians immediately saddled their horses and with rifles in front of them took up the trail. It followed up the Virgin 12 miles then took off up a dry arroyo known as Bitter Spring wash.

Twenty miles up this wash, approaching Muddy peak, they got into rough country, and as the tracks could not be followed over the rocks at night, they returned to the ranch. They reported the trail was bearing toward Las Vegas valley.

Next morning with an Indian companion who knew the country, I started for Las Vegas ranch, 50 miles away, to see if the thief had been seen there. We followed down the river for 10 miles, then detoured over a summit in Boulder canyon and returned to the stream again at old Fort Callville. Darkness found us at the mouth of Las Vegas wash, still 25 miles from the ranch.

We made camp in the river bottom,

and as we thought it best not to light a fire we put in a cold sleepless night. As soon as it was light enough to get our bearings we were on our way again. We passed the camp of a lone prospector with two burros and rode to the Stewart ranch. The cowmen there had seen neither the missing horse nor any strange rider. But at the Ed. Kyle ranch two miles beyond the owner told us that two days previous the Indian Mouse had stopped and asked to borrow a knife to mend his shoes.

Mouse told the rancher his horse had given out at Dry lake 25 miles away, and he had shot the animal and walked in. The Pahute was nervous, Kyle said, and instead of going to a nearby Indian camp he headed out across the desert in the opposite direction.

I was sure then that Mouse was the man who had stolen our horse. Next day we tried to follow the Indian's trail but were unable to pick up his tracks and at two o'clock in the afternoon took the backtrack toward Bonelli's.

About dark we reached the river bank opposite the camp of Stearns, Davis and Major Greenowat and decided to remain overnight with them. I fired my six-shooter several times to attract their attention and after a half hour's delay the major came over in his boat and picked us up.

When I inquired about Stearns and Davis he told me they had departed five days before with an Indian named Mouse who had promised to lead them to a rich gold mine. He assumed they had gone up the river to Bonelli's for additional supplies and had not worried about their absence.

I suspected treachery, but I did not mention my fears to the old major. We stayed overnight with him and continued to Bonelli's the next day. When I told my story Bonelli and the others at the ranch shared my feeling that all was not well with Stearns and Davis.

Two trappers, Richmond and Galloway, were camping at the ferry at the time. They had started at Green River, Wyoming, and had run through the rap-

ing prospectors. In addition to the trappers and myself there were two white ranch hands and an Indian tracker.

We went to the camp down the river and after staying all night with Major Greenowat, took up the trail of his two partners and Mouse. The tracks led us high into Boulder canyon range. All day we crossed canyons and climbed ledges—and toward evening our trail ended at the foot of a cliff where lay the mutilated bodies of Stearns and Davis.

Evidently they had been climbing the rock face above, with Mouse in the lead, Davis next and Stearns following. The Indian had shot them from above, first Davis and then Stearns and the bodies had fallen 20 or 30 feet down the side of the cliff. Mouse had taken Davis' six-shooter and Stearns' high top boots, but had not bothered with \$55 in currency the latter had in his pocket.

It took two days to get the bodies back to camp and we arranged for Richmond and Galloway to take them with Major Greenowat down the river to Needles.

After killing the prospectors Mouse had remained in hiding, most of the time in the vicinity of Indian springs at the north end of the Charleston range. He was seen twice by Charlie Towner who lived at the springs, and once Towner talked with him at long range, but Mouse kept his distance. Occasionally he would loot a prospector's camp or kill a range steer or mustang to provide the jerkies on which he lived.

In the spring of 1900, J. W. Thomas who was running a saw mill in the Sheep mountains, missed one of his horses. Tracks showed the animal had been caught and ridden away by the thief. With one of his mill hands Thomas followed the trail. They found places where the fugitive had dismounted and concealed himself behind rocks as if to ambush the pursuers he knew would follow him. For unknown reasons he failed to carry out this plan. When the tracks finally led out of the mountains into the open desert Thomas once or twice thought he could see a horseman many



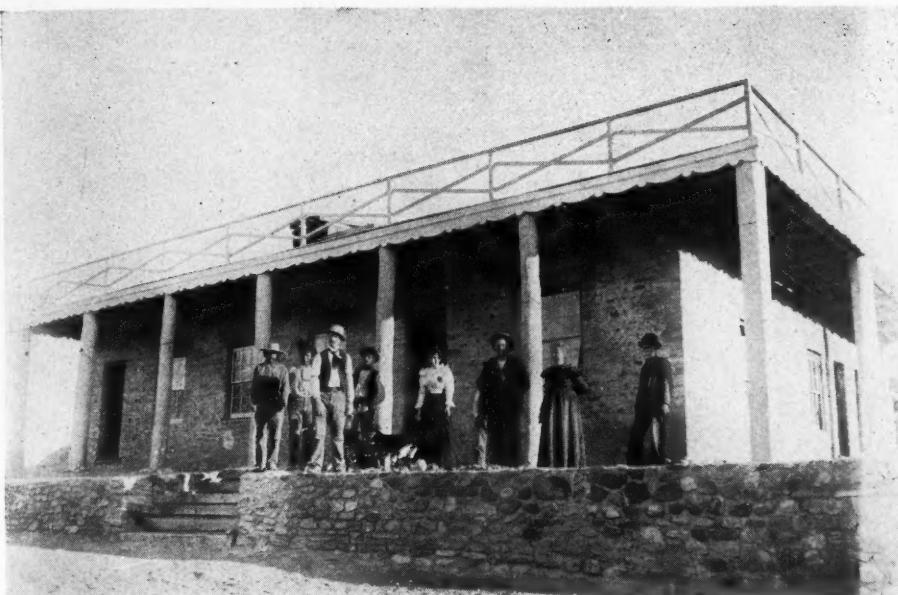
Daniel Bonelli, photographed at the time he was operating the ferry. He came to southern Nevada in 1865 and established the ferry on the Colorado river in 1872. He was of Swiss descent and highly educated speaking English, Italian, Swiss and German fluently. George Perkins says of him: "He was a real pioneer and one of the finest characters it has been my lot to meet."

ids in the Grand Canyon in two small boats decked over with canvas. They were on their way to Needles, California.

When they heard my story they agreed to remain over a few days and join a searching party to look for the two miss-



The cross shows the location of Mouse's tanks—so named because it was a favorite hideout for the renegade. The tanks are in the Valley of Fire—now one of the popular tourist attractions in this region.



Old ranch house at Bonelli's ferry — now under 450 feet of water in Lake Mead. Building was erected in the late 70s from native stone and timbers salvaged from the flood waters of the Colorado river. Persons in this old photograph left to right, Moapa Tom, member of the posse that stayed on the trail till Mouse was brought to justice; Wion, an Indian ranch hand; Joe F. Perkins, foreman of the Bonelli ranch; an unidentified Indian boy; Alice Bonelli, a daughter; Frank Rossitor, prospector; Mrs. Bonelli and Daniel Bonelli.

miles ahead, going toward Charleston mountains.

The possemen had left their camp with little food, however, and finally gave up the chase and turned back. They were sure the horse-thief was Mouse. A month later the horse, with a short piece of rope tied to his neck, returned to his old range. Evidently he had been starved and abused, and had broken away at first opportunity.

Another year passed and the renegade Pahute was still at large on the southern Nevada desert. Rumors drifted into the camps that he had been seen occasionally. Those who knew the desert country were confident that hunger would sooner or later bring him out of hiding. Range riders kept their rifles with them always and were on the alert when they approached mesquite thickets or blind canyons where ambush was possible. Most of the prospectors working in that region acquired dogs to warn them of the approach of a stranger in the night.

Indians in camp at the ranch settlements were nervous, and could not be induced to sleep alone at places where running water or other conditions made it impossible for them to hear every sound. They knew Mouse was desperate and would hesitate at nothing. He was now an outcast from his tribe, with a price on his head. Mohave county, Arizona, and Lincoln county, Nevada (this was before Clark county was established) had

offered rewards for the Indian dead or alive.

July 4, 1901, settlers from all over the Moapa valley gathered at Overton, the most central location, for their annual festival of sports. The Pahutes always attended these celebrations, arriving from all over the region in old wagons, buggies and on horseback. They were inveterate gamblers and the horse-racing always attracted them.

Returning to one of the Indian villages after the celebration, an old Indian woman discovered a head of cabbage had been taken from her little garden patch. The tracks were plain and the Indians recognized them. Mouse was in the country again.

Immediately a posse of white men and Indians was formed to take the trail. I was one of those who volunteered and the incidents of the next few days remain clear in my mind.

We followed the tracks south 20 miles through the Valley of Fire to some natural tanks, now called Mouse's tanks. The outlaw had camped here, but he was many hours ahead of us.

We crossed rocky mesas where our only guide was an occasional misplaced pebble. The route led down to St. Thomas where the fugitive had robbed a green cornfield, and then doubled back again to the Valley of Fire.

The Indians were especially anxious to catch up with Mouse. They feared him

and wanted him killed. The trail led north 30 miles to upper Moapa valley and then up Meadow valley wash to Cane springs.

We had been out eight days now and the heat was terrific. The feet of some of the Indian trailers had become so blistered they had to drop out, but we knew we were getting closer to the Indian outlaw and the time had come when we must put an end to his terrorism.

The trail doubled back towards Warm springs in upper Moapa valley. Our Indians knew they were close behind their man and despite the fact that they were nearly worn out with 10 days of incessant pursuit under the worst possible conditions, it was hard to hold them back. They were afraid Mouse would get away as he had done many times before.

When we caught sight of him he was crossing a smooth clay flat four miles north of Warm springs. Instantly guns were brought into play. The pursuing Indians fired the first shots, and Mouse returned the fire. He would empty his gun and then turn and run while he was reloading.

The battle ended when the renegade dropped in his tracks. When we caught up with him he was dead, with three bullet holes through his body. The Indians wanted to make sure of their job, and fired several shots into his body after we came to him.

He still had the rifle stolen from the White Hills store and the six-shooter taken from the body of Davis. The boots he had taken from Stearns had been made into moccasins. The heavy mustache he had formerly worn had been plucked out, evidently in an effort to disguise himself.

The hunt for Mouse was over, and we were now confronted with the problem of getting him back to one of the ranches where he could be identified. The Pahutes, superstitious about such things, refused to touch the body. After much persuasion and the promise of a generous share of the reward money they finally helped lash the body on a pack animal. We took him nine miles to a ranch owned by two squaw men. Several ranchers gathered here and held an inquest and made the affidavits necessary to collect the reward. After paying the expenses of the posse the money was divided equally among the Indian trailers who had done such excellent work in following him.

The body was buried in a shallow grave in an arroyo a short distance away — and that was the end of the trail for Mouse.

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Mine That Has Everything ... Except Gem Stones

John Hilton went out into the Vallecito desert of Southern California to locate a ledge of rose quartz. The quartz did not prove out — so John spent the day exploring the tunnel and dumps at an old tourmaline claim. From his story the student and collector will learn something about the odd pranks Nature sometimes plays on gem miners.

By JOHN W. HILTON

We stood on one of the foothills of the Piñon mountain range, Everett Campbell and I, and gazed across the rain-washed expanse of Mason valley. Storm clouds were gathering overhead but there were occasional patches of blue sky through which the sun projected marching patterns of light and shadow on the desert floor below.

Far out on the Vallecito desert and over Borrego way rain was falling in black curtains, blotting out the sky. "It is raining dollars for cattlemen," Everett remarked. "If this keeps up the filaree will be knee deep in the valley."

We had come to this hill in the desert region of San Diego county, California, to verify a report that rose quartz was to be found here. The quartz proved the common white variety iron-stained to a reddish brown. But we were well repaid for our climb up the rocky slope. The September rains almost overnight had changed the brown landscape of late summer to a hundred shades of green. It was a gorgeous panorama.

Directly below us were the springs and the crystal stream

that supplies the Campbell ranch with water. On a bench above the stream were the crumbling adobe walls of the old Mason ranch home.

From our lookout we could easily pick out the trail of the old Butterfield stage road where it came over the pass, turned in to the springs for water, and then continued across the floor of Mason valley toward Box canyon.

At the base of the hill near the remains of an old rock corral we saw the grave of Mrs. Mason, courageous wife and mother who pioneered in the early days of this desert country. No epic account of her heroism is engraved on a marble slab or bronze plaque. A wooden fence that once surrounded the grave has been broken down by range cattle and the unmarked mound is rapidly being leveled by erosion. There were slabs of rock near at hand, and we paused as we passed the spot and covered the mound with flat boulders so that its location would not be lost forever. That seemed the least we could do.

Across the valley on the slope near the base of the Laguna range could be seen the white dumps of an old tourmaline prospect. I had visited it many years before. Everett said the mine had not been worked since 1914.

Since our rose quartz ledge had failed to materialize, why not take the readers of the Desert Magazine on an excursion into the tourmaline workings?

At least the mines were worth investigating, and so we followed the winding road across the floor of the valley to the foot of the slope on which a dim trail leads up the hill 200 yards to the main tunnel.

As we went up the grade we saw numerous pieces of black



MOTORLOG

To reach the old mine described in this story follow state highway 78 to its junction with the Vallecito road 12 miles east of Julian, California. With the speedometer at zero, the mileages from this point are:

Junction	00.0
First summit	5.6
Top, Box canyon grade	8.8
Turn right toward mine	9.8
Take left turn at	10.1
Take right turn at	11.4
End of road below mine	11.8

White dots in the black circle in the accompanying picture show the mine dumps as seen from the main road through Mason valley.



tourmaline and glassy fragments of milky and grey quartz scattered through the dwarf desert shrubbery.

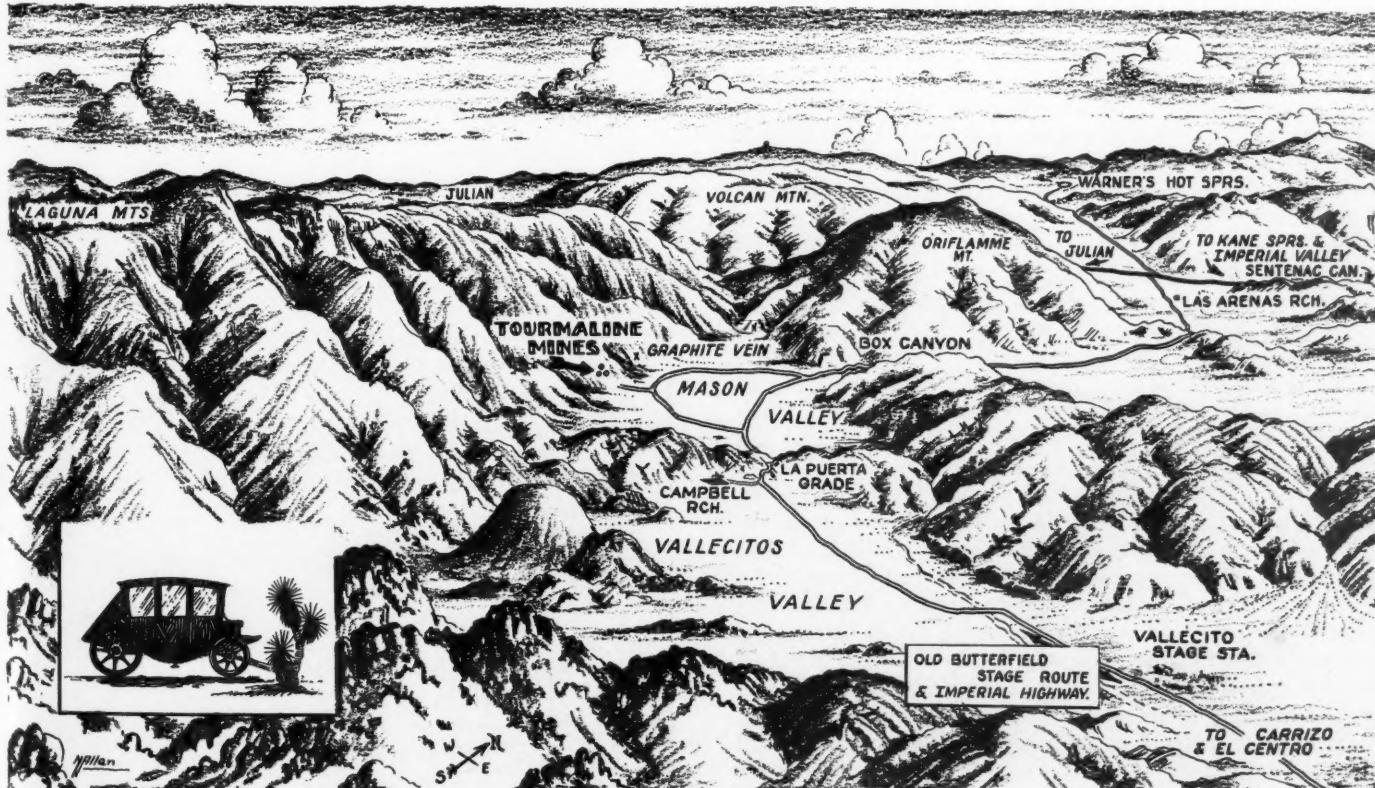
The ledge proved extremely interesting, and this is an excellent spot for the study of minerals. Here the beginner will not only get a good introduction to pegmatite ledges, but he can also collect representative specimens of the minerals they contain.

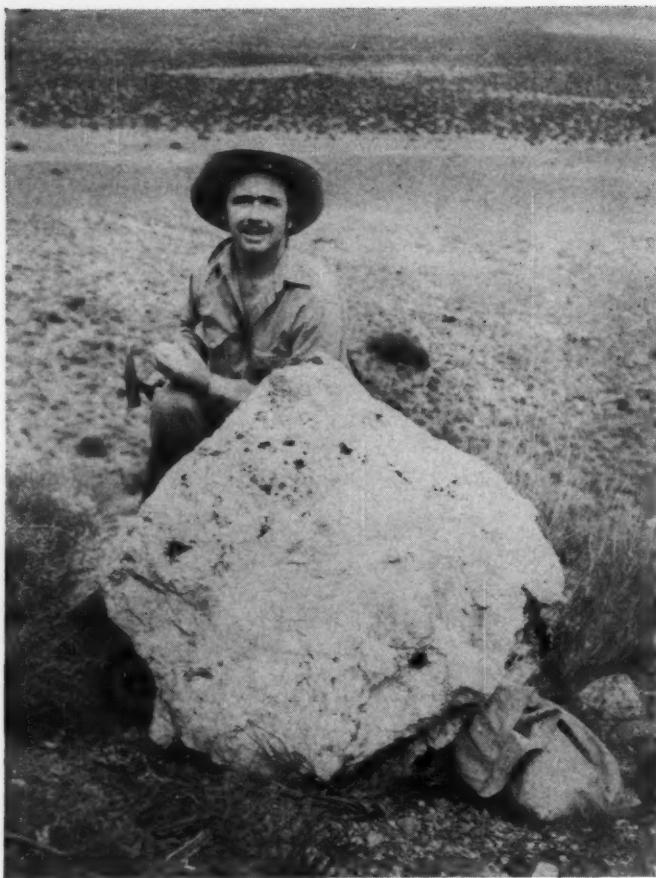
The pegmatite ledges of San Diego county have produced some of the finest semi-precious gem and mineral specimens the world has ever known. It is reasonable to believe that in less explored regions of Arizona, Utah and Nevada where pegmatites exist other equally productive mines will be developed in future years.

Typical specimens of tourmaline as it occurs in quartz crystals. The specimen on the left is green and lavender, the one on the right black. These crystals came from San Diego county, but not the mine described in the accompanying text.

These Southern California gem ledges have certain characteristics in common, which briefly are as follows: Pegmatite like other granites is composed of three principal minerals, quartz, feldspar and mica. One of the main differences is the size of the individual crystal masses in each. Even in ordinary coarse-grained granite the crystalline segments are less than a quarter of an inch in diameter.

Pegmatite, however, sometimes includes crystal masses of





John Hilton sampling one of the boulders mined from the tunnel. The black crystals imbedded in the quartz are tourmaline, but not of gem quality.

single minerals, such as feldspar or quartz, which are several feet across.

Inspecting an ordinary pegmatite ledge we find that it dips into the hill at a very steep angle, but not quite perpendicular. A cross-section discloses the fact that the crystallization becomes smaller and more compact as it nears the foot wall or underside of the ledge. Here we see wavy parallel lines of bright color running lengthwise with the vein. A close examination shows these to be made of countless tiny crystals of tourmaline, garnet, etc. Gem miners call this the "line rock" and consider it one of the necessary factors in a good gem vein.

Near the center of the ledge the mica becomes more pronounced and the sections of quartz and feldspar are larger and more sharply angled. This is known as the pay streak and is where the rare mineral gems are most likely to be concentrated in pegmatite deposits.

Here, hollow pockets are likely to occur in which gem quality tourmaline, kunzite, garnet or topaz are found. Such pockets are filled loosely with soft mica talc or clay, and surrounded by pocket liners of quartz or feldspar crystals to which colored gems often are attached. The finest gems, however, are packed in the loose pocket filling and are not attached to any solid part of the vein. These crystals have thus been protected from pressure cracks due to earth movements.

Such pockets as I have just described appeared to be lacking in the ledge at Mason valley, and this no doubt explains the abandonment of the property. A tunnel over a hundred feet in length had been driven into the side of the hill, and we followed this to its end, but saw no evidence that the miners had encountered a crystallized section such as would indicate the presence of gems.

Evidently considerable money had been spent in prospecting this claim, but there was nothing to indicate it had been a paying investment.

There was no indication that pockets of quartz crystals had been encountered. On the other hand, biotite mica, which most miners consider a poor indication of gems, partially replaces the muscovite and lepidolite in the depths of the tunnel.

Such is the gamble of gem mining. Pockets containing glittering wealth have been found by inexperienced miners only a few feet from the grass roots. At other times seasoned miners have followed promising leads hundreds of feet without reward.

Here we have a ledge in which the outcropping shows everything a gem miner could ask for—"line rock" on the

Continued on page 35

TOURMALINE MINE YIELDS MANY SAMPLES

Following is a partial list with description of the minerals found by John Hilton at the tourmaline mine described in the accompanying story:

1. Tourmaline: A complex silicate varying in composition but always containing boron, aluminum and water with the varying addition of other substances such as lithium, magnesium, sodium, iron and chromium; hardness 7 to 7.5; specific gravity 3.0 to 3.2; crystals, rhombohedral prisms showing striations parallel with the prism faces; color black and brown in the common forms and almost every color in the spectrum to colorless in the gem forms.

2. Microcline: a potassium feldspar; hardness 6; specific gravity about 2.5; color usually white, grey or cream, in rare instances pink or green.

3. Albite: soda feldspar, a silicate of aluminum and sodium; hardness and specific gravity the same as microcline. Color usually snow white, sometimes grey.

4. Garnet: the yellow or brownish varieties found in this deposit are essonite. The tiny purplish specimens are probably almandite, but due to their size are hard to identify. Both gems have a hardness of 7 to 7.5; specific gravity of the first around 3.5, the latter 4.2. All garnets belong to the cubic system.

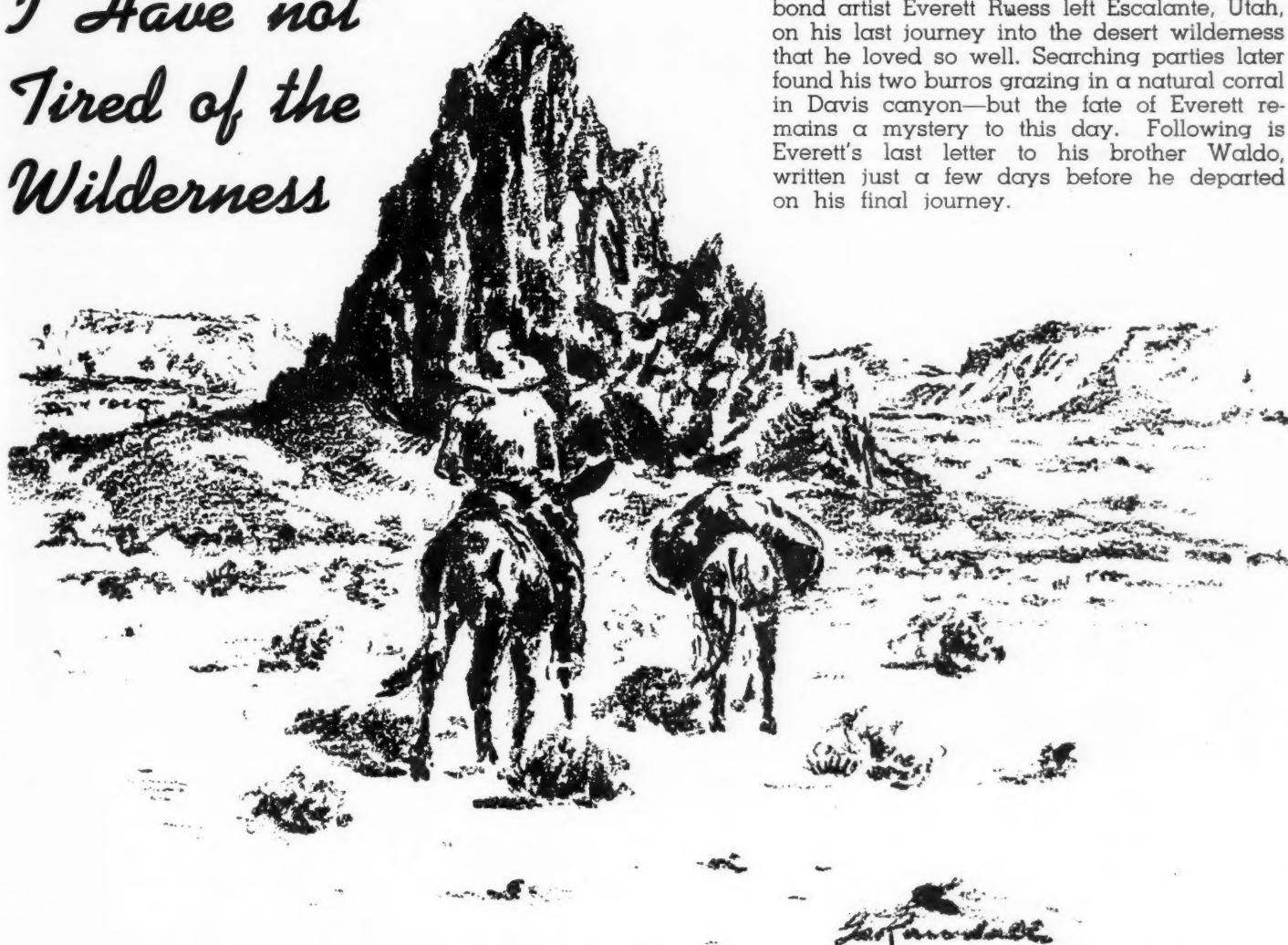
5. Muscovite: hardness 2 to 2.5; specific gravity about 2.8; form monoclinic but crystals usually in six-sided plates; color white to pale green in this deposit. Muscovite is a silicate of aluminum and potassium with water entering into the compound.

6. Biotite: complex silicate of aluminum, magnesium and potassium and iron; hardness 2.5 to 3; specific gravity about 2.9; form same as muscovite; color usually black with golden glints. Unweathered flakes are tough and flexible.

7. Lepidolite: a silicate of aluminum, potassium and lithium combined with water and fluorine and sometimes the rare metals rubidium and caesium; color usually lavender or grey; form usually compact masses of thousands of distinct plates or scales; hardness at times 4 and as low as 2.5; specific gravity 2.8 to 3.3.

8. Epidote: silicate of aluminum, iron and calcium; hardness 6 to 7; specific gravity 3.2 to 3.5; form monoclinic, usually occurs in radial clusters; color usually a yellowish green.

I Have not Tired of the Wilderness



On November 11, 1934, the young vagabond artist Everett Ruess left Escalante, Utah, on his last journey into the desert wilderness that he loved so well. Searching parties later found his two burros grazing in a natural corral in Davis canyon—but the fate of Everett remains a mystery to this day. Following is Everett's last letter to his brother Waldo, written just a few days before he departed on his final journey.

By EVERETT RUESS

Escalante Rim, Utah
November 1934

Dear Waldo:

As to when I shall revisit civilization, it will not be soon, I think. I have not tired of the wilderness; rather I enjoy its beauty and the vagrant life I lead more keenly all the time. I prefer the saddle to the street car, and the star-sprinkled sky to the roof, the obscure and difficult trail leading into the unknown to any paved highway, and the deep peace of the wild to the discontent bred by cities. Do you blame me then for staying here where I feel that I belong and am one with the world about me? It is true that I miss intelligent companionship, but there are so few with whom I can share the things that mean much to me that I have learned to contain myself. It is enough that I am surrounded with beauty and carry it with me in things that are a constant delight, like my gorgeous Navajo saddle blankets and the silver bracelet on my wrist, whose three turquoisees gleam in the firelight.

A few days ago I rode into the red rocks and sandy desert, and it was like coming home again. I even met a couple of wandering Navajos, and we stayed up most of the night talking, eating roast mutton with black coffee, and singing songs. The songs of the Navajo express for me something that no other songs do. And now that I know enough of it, it is a real delight to speak in another language.

I have not seen a human being nor any wild life but

Illustration by G. A. RANDALL

squirrels and birds for two or three days. Yesterday was a loss as far as travel was concerned, for I got into an impasse in the head of a canyon system, and had to return to where I started. Last night I camped under tall pines by a stream that flowed under a towering orange cliff, like a wall against the sky, dwarfing the twisted pines on its summit and the tall straight ones that grow part way up the face of it. It was glorious at sunrise. Today I have ridden over miles of rough country, forcing my way through tall sage and stubborn oak brush, and driving the burros down canyon slopes so steep that they could hardly keep from falling. At last I found a trail, and have just left it to make dry camp on what seems like the rim of the world. My camp is on the very point of the divide, with country falling away to the blue horizon on east and west. The last rays of the sun at evening, and the first at dawn reach me. Below are steep cliffs where the canyon has cut its way up to the rim of the divide. Northward is the sheer face of Mount Kaiparowitz, pale vermillion capped with white, with a forested summit. West and south are desert and distant mountains. Tonight the pale crescent of new moon appeared for a little while, low on the skyline, at sunset.

This has been a full, rich year. I have left no strange or delightful thing undone that I wanted to do.

Affectionately,

EVERETT.

When first frost comes to the high mountain region of northern Arizona, Old Lady Sam gathers her family for the annual trek to the piñon forests to harvest the nuts. To thousands of Navajo families the piñons are an important item for both food and barter. Here is an intimate picture of an industry that is strange to most Americans.



CHARLES KEETSIE SHIRLEY

Harvest Camp in the Navajo Forest

Illustrations by the Navajo artist
CHARLES KEETSIE SHIRLEY

By RICHARD VAN VALKENBURGH

OLD Lady Sam—her Navajo name is *Hunusbaa*—had invited me to visit her piñon harvest camp deep in the mountain forest that covers the Navajo reservation north of Fort Defiance, Arizona.

Piñon nuts are one of the main sources of cash income for the Navajo, and I was glad to accept the invitation.

I invited Benny Tildon to accompany me. Benny is the son of a Navajo medicine man—the well educated son of an intelligent father. His childhood was spent in a hogan—his youth as an honor student in an American school.

We followed the dirt road that climbs to the higher levels and came to a cairn of stones. They had been piled there by Old Lady Sam. A piñon bough stuck in the top of the pile pointed toward the south. Dim wagon tracks guided us through the dense forest. The pleasant scent of burning piñon wood permeated the autumn air. Pillars of slate-blue smoke rose above the tree tops. Piñon jays flew screeching from limb to limb.

Just when we concluded we were lost, the wagon tracks led us into a small oval clearing. White tents were pitched on the grama grass. An indistinct bundle of crimson moved under the overhang of a large rock. When we drew near we saw that it was the generous figure of Old Lady Sam. She smiled her welcome as she dipped water from a tiny spring that seeped from under the rock.

The piñon nuts were plentiful this season. *Hunusbaa's* grandsons had gone out through the forest several weeks earlier in the season to scout for good harvest areas. They searched for slopes where the trees had received the proper amount of moisture between March and the first of June—that is the period when the nut-bearing cones are formed and the bountifulness of the fall harvest is determined.

The boys had returned with good news. There was an excellent crop between Cross canyon and Nazlini canyon. They would have to hurry, for the pack rats and piñon jays were making fast work of the ripened nuts. The wagons were loaded with camping equipment and

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the seeding zone was reached with the coming of frost.

When we arrived camp was well established. Children clinging to the long skirts of their mothers were out helping gather the newly fallen nuts. Even ancient great-uncle *Taatc'ni Sani* was working. It was Old Lady Sam's day to keep camp.

With the yellow glow of evening came the harvesters. Each carried a small flour sack filled with piñon nuts. Large canvas bags ranged along the inner walls of the storage tent. Each Navajo poured a dark-brown stream of nuts into his individual storage bag. There would be no mix-up when it came time to barter them to the trader.

Old Lady Sam bossed the storing. She cluttered like a fat old hen. She looked sharply with her keen black eyes to see that no blighted or broken nuts went into the bags. The blighted nuts would have shrivelled kernels and the broken or chipped ones from pack rat nests would have the meats gnawed out. Should these get into a bag, the trader would protest and cut down the price.

Each Navajo large and small left a few nuts in the bottom of his bag. They were poured into Old Lady Sam's bag to pay her for keeping camp. She beamed as this was done and said, "Come! This was a good day. Now let us eat."

I watched the scene before me, wondering what the Navajo would think if they could visualize the ultimate destination of their crop in New York City. Some



Cone of the piñon pine.

time previously I had interviewed a member of a business firm dealing in piñon nuts. We had discussed the commercial aspects of the business.

I learned that bumper crops come every four years. During these years the traders buy enough piñon nuts by the end of October to fill many freight cars. These cars are dispatched mostly by Gallup firms to New York. A New York concern has a monopoly in the east and controls 95 per cent of the piñon nuts shipped out of the Indian country.

The last bumper crop was in the fall of 1936. Navajo families, transported by

Typical piñon forest and seasonal hogan used by nomad Navajo Indians.

"wildcat" truckers and traders, were scattered from Rio Arriba county in north central New Mexico to Pie Town on the highway that links Springerville, Arizona with Magdalena, New Mexico.

The harvest of 1938 was fairly good. The bulk of the crop came from the south rim of the Grand Canyon. Some came from the west bench of the Defiance plateau between Pine Springs and Nazlini, Arizona.

The Navajo barter their nuts to the traders, selling five-sixths of their harvest and retaining one-sixth for their own use.

Prices vary according to the size of the crop. In 1936 the Navajo received from eight to 10 cents a pound in trade and a cent less for cash. Early in 1938 the price was around 15 cents a pound but dropped to 10 cents when the stream of nuts started to pour in. In 1918 they brought 18 cents a pound. The highest price on record was that of 1922 when 22 cents a pound was paid.

Expert pickers gather 50 pounds a day. When the price is eight cents they receive four dollars for their long day's work. The average picker makes two dollars a day.

In 1936 nearly 160 freight cars of piñon nuts from the Indian country were shipped to New York. This 4,000,000 pound harvest was worth approximately \$500,000. For comparison, the Navajo rug industry totals an average of \$300,000 a year.

When the nuts reach New York City





The entire Navajo family, except those left to care for the sheep, join in the annual trek to the piñon forest—the transportation may be either wagon or saddle ponies.

they are hulled by mechanical shellers. The kernels are crushed to make an oil used in the manufacture of cosmetics. In addition, both shelled and unshelled whole nuts are sold in cellophane bags. It is reported that shelled nuts sell as high as 70 cents a pound in New York City. They are greatly favored by the foreign population on the east side of the city.

While there is no premium paid for excellence of flavor, the late Bert Staples, former president of the Traders' Assn., once stated that piñon nuts from certain regions of the Indian country are flavored better than those from other regions. This he attributed to better tree nutrition in the favored localities and pointed out that in the Vermont sugar-maples, the trees growing near certain kinds of granite rock produce a sap with a distinctive flavor.

The nuts are cured by simmering in a 10 per cent salt solution of warm water. After the water cools, the nuts are removed and stored for one year before they are placed on the market. They are also roasted. The Navajo eat them raw and roasted, as well as grinding the kernels into a paste on a stone metate.

Raw piñon nuts have a delicate flavor and make delectable food—but like other nuts should not be eaten in too great quantities at one time. Archaeologist Charles Cosgrove died from their effects while assisting in the excavation of the old Hopi town of Awatobi in 1936.

In the Navajo country piñon trees grow at elevations between six and eight thousand feet. The predominant species is the *Pinus edulis*. Some piñon trees near Mariana lake east of Gallup, New Mexico, are 450 years old. Under the best growing conditions they will produce nuts (seeds) when they are seven years old. Most trees do not produce un-

til they are near 15. After that they produce every two years. Some piñon trees grow to a height of 50 feet. The average runs around 25 feet.

There is no such thing as a domesticated piñon tree. Some years ago a man bought several sections of New Mexico piñon forest. He irrigated, cultivated, and fertilized the ground under the trees. His attempt was unsuccessful.

It was grey dawn when we hurried from breakfast to follow the harvesters for our first try at gathering piñon nuts. Wraiths of mist swirled up through the trees. Frost made our eyes water, and the tears froze to our cheeks.

The waxy cones had burst when the first frost came. The small dark-brown nuts near the size of an olive seed had dropped from their sheaths. The nuts lay on the moist humus mixed with twigs, broken hulls, and piñon needles.

Old Lady Sam went down on all fours with an "umph." She tucked the hem of her long tan skirt under her knees and went to work. Her smooth brown fingers moved dexterously as she picked up the nuts and put them in her flour sack.

We followed suit. After an hour my fingers grew sore and stiff. My back began to ache. Soon we had the circumference under the tree cleared of nuts. When we arose to move to another tree I grumbled, "Isn't there an easier way to pick these confounded nuts, grandmother?"

Old Lady Sam answered blandly, "You white men always try to find an easier way to do everything. You probably want to hunt for pack rats' nests of piled twigs. Then you'd get from five to 15 pounds all in one bunch. But you'd get fooled. First, you would get cactus needles in your fingers. Those wise little fellows mix them with their caches. Then you would try and sell them to the trader. He'd

turn you down for the ends would be chipped and the hearts gone."

There are other methods of harvesting. All are hard. If the cones have not burst and the nuts are still up in the trees, the Indians lay tarpaulins or blankets on the ground. Then they throw or push sticks up into the trees and knock the cones down. The nuts are sometimes picked up right there. At other times they are brushed up into piles with the litter that lies under the trees. These piles are sacked and carried back to the camp for screening.

One day Old Lady Sam waddled into camp in the middle of the morning. Her smooth round face was filled with chagrin. Her empty sack dangled from her red and green woven belt. "What is wrong, grandmother?" I asked.

"Everything!" she answered as she plumped down on a soft pile of bedding to catch her breath. "Those Bear people are here again. They go crazy for piñon nuts. Pretty soon they will be coming right into my camp and running over people. Just now I saw a big bear shaking the nuts out of a tree. I know it was a bear for I saw his brown fur."

"That's the way with the Bear people. They always find out where the piñons are plentiful. Besides stealing our food and wrecking our camps they spoil the trees. We Navajo don't take nuts from trees where bears have been. That would be like harvesting from a tree that had been struck by lightning or a whirlwind. I wish they would go into their dens and go to sleep."

Early the next morning I went to see if I could get a picture of Old Lady Sam's bear picking piñons. Benny declined with finality. He had no business with the Bear people.

I climbed a small knoll where I could survey the forest. Soon I saw a tree shake. I slipped down the knoll and crept toward a tree. Camera ready, I lay poised. The shaking stopped. Something furry moved behind the trunk. Out into the open he came. There stood old bowlegged Posy Crow from Ganado. Around him was wrapped an old beaver coat and on his head was a fur cap with the earflaps turned down. He was Old Lady Sam's bear.

When I returned to camp and told Old Lady Sam that her bear was old Posy Crow she looked blank for a moment and then sputtered, "That old fool always does that. He finds some good trees near some camp. Then he wraps up in that fur coat and scares other Navajo away by acting like a bear. He better be careful. A stranger will think he is witching and shoot him. Bad luck will catch up with him anyway. Even if he is a little crazy he knows better than to shake trees. The

Continued on page 43

GNOMES OF THE DESERT NIGHT . . .

Continued from page 19

structive creature, grey or black in color, with slender head, large ears and scaly tail; a slinking, disease carrying creature which follows civilization, zoologically classified as *Mus ratus*.

The Dipodomys are entirely different creatures and all who admire them agree it is a shame the name rat has been attached to them.

The World Book Encyclopedia classifies them as *Jerboa Depodidae*. "California Mammals" by Frank Stephens classifies them as DI-POD' O-MYS (-o-mis) N. from Gr. *dipous*, *dipodoo*, two footed.

Family, HETEROMYIDAE. Sub-family, DIPODOMYINAE. Genus, PERODIPUS (Fitzinger) Pouch—two footed.

Some authorities claim there are as many as fifty varieties, varying in size and species.

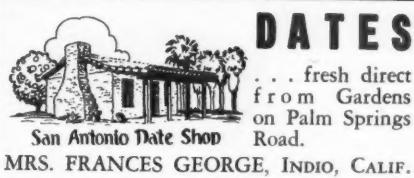
The New International Encyclopedia, Jovanovic Leprohon, lists but four, *Dipodomys Deserti*, *Dipodomys Merriami*, *Merriami*, *Dipodomys Mohavensis* and *Dipodomys Agilis* (Gamble).

The lengths of the bodies vary from three to seven inches, the tail being twice the length of the body and tufted at the end.

The Dipodomys require no water and their natural locality is the dry desert country of Southern California, western Arizona and northwestern Sonora. They

live in small colonies. Their habitation is often a labyrinth of intercommunicating burrows from a few inches to two feet beneath the surface. Sometimes a colony is found in a low mound formed by a sand drift about a desert shrub; at other times in the flat level surface of a dry lake.

They store large quantities of weed seed, the destruction of which more than counterbalances any harm they may do.



DATES

... fresh direct
from Gardens
on Palm Springs
Road.

MRS. FRANCES GEORGE, INDIAN, CALIF.

COME TO EL CENTRO



HUB of the Southwest Desert . . .

"THE HEART OF IMPERIAL VALLEY"

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EL CENTRO CHAMBER OF COMMERCE

EL CENTRO, CALIFORNIA

ROBERT HAYS, Sec.-Manager.

RHYOLITE

The picture shown below is the ruin of the old Overbury building in the ghost mining camp of Rhyolite, Nevada. The winner of the prize offered by the Desert Magazine in September for the best story about this abandoned structure is Myrtle T. Myles of Reno, Nevada. Her manuscript is printed on this page.



By MYRTLE T. MILES

THE landmark pictured in the September issue of the Desert Magazine shows ruins of the Overbury block in the ghost camp of Rhyolite in southern Nevada.

Rhyolite (so named for the volcanic formation) belongs to that colorful period in Nevada mining following the turn of the century after Jim Butler's burro had kicked the top off the Mizpah ledge and started the Tonopah excitement. It is about three miles west of Beatty in Nye county and may be reached by State Highway 58 branching off U. S. 95, or over Daylight pass from Death Valley. It lies in a depression of low hills that opens southwest toward the Funeral range and is known to old-timers as the camp that appeared overnight. "Bullfrog Smith" made the first strike in the vicinity in 1904, and a town was started. The district was named Bullfrog. Then Bob Montgomery discovered and located the Montgomery-Shoshone. The Busch brothers laid out a rival townsite there offering a free lot to anyone who would pitch his tent in their town. So promptly was the offer accepted that by the next morning the entire population had moved over and Rhyolite was on the map.

John T. Overbury had come to Nevada during the boom and in partnership with

Clarence Oddie took the contract to build the railroad grade into Tonopah. He was attracted by the new strike and in the spring of 1906 built the block which bears his name. By now Rhyolite was a thriving town with two banks, a newspaper, a \$50,000 school, business houses of all kinds and attractive homes covering the hillsides. The Las Vegas and Tonopah and the Tonopah and Tidewater railroads connected it with the Union Pacific at Las Vegas and with the main line at Ludlow. The stucco depot of the former has recently been remodeled for a southern Nevada night club. Another landmark is the Bottle House, a three room cottage made entirely of beer bottles.

The Overbury block was occupied by one of the banks, a jewelry store and various business offices. The San Francisco earthquake and fire and the panic of 1907 withdrew capital from Nevada mines and the camp began a rapid decline. By 1912 the Overbury block was unoccupied, but the final close down of the mines did not occur until 1918. Homes were left with furniture standing and lizards and horned toads scuttle about among old newspapers and forgotten mining stock certificates left in dusty corners. In the early 1920s the

camp was used as location for the picture "The Air-Mail" starring Billy Dove and in which Douglas Fairbanks, Jr. had an early role.

John T. Overbury left with the rest but the desert called him and he returned only to meet his death for he was killed in an accident near Goldfield August 1923. Among his effects was found a request that wherever he might die he be buried at Rhyolite. His wishes were carried out, and his body rests in the cemetery below the deserted camp.

OUTPOST ON THE COLORADO

Continued from page 8

be the camping ground on this side for the reason that the river is wider here, perhaps than at any other point on it and one side is impassable for a great portion of the year, and yet I understand that this command has positive orders to establish a two-company post on the west bank, a place inferior in every respect to a camp in the Dismal Swamp of Virginia."

Permanent quarters were constructed of cottonwood, willow and mud mortar. The roofs were flat, covered with brush and mud. Fort Mojave received its official name sometime between April 28 and May 3, 1859.

Two years later, almost to the day, on April 29, 1861, the fort was ordered abandoned, the garrison and public property to be removed to Los Angeles in order that the troops might protect the latter pueblo from attacks by trouble making Southern sympathizers. In April 1863, troops were once more ordered to take up quarters at the dreary outpost on the Colorado.

A visitor at Fort Mojave in September, 1871, left this description of the army post as he observed it at that time. He wrote:

"It is about seven miles below Hardystown, close to the Colorado river and hotter than the hinges of any preacher's h—l. It is a well built, clean, comfortable post, and we may suppose far preferable as a summer residence to h—ll or Fort Yuma, although its occupants claim it is hotter than either of those places. Indeed Major Pond, the gentlemanly commandant assured us that he had frequently seen the mercury rise up to stand at 118° in the shade! This too in the coolest place in the coldest house in the fort. The Major took us through his company quarters and neater quarters we have never seen. It was Sunday and the men were enjoying themselves, some reading, some sleeping and so on. All had neatly painted bedsteads, and the arms, furniture, etc., shone with brilliancy that not even the camp of a single fly marred."

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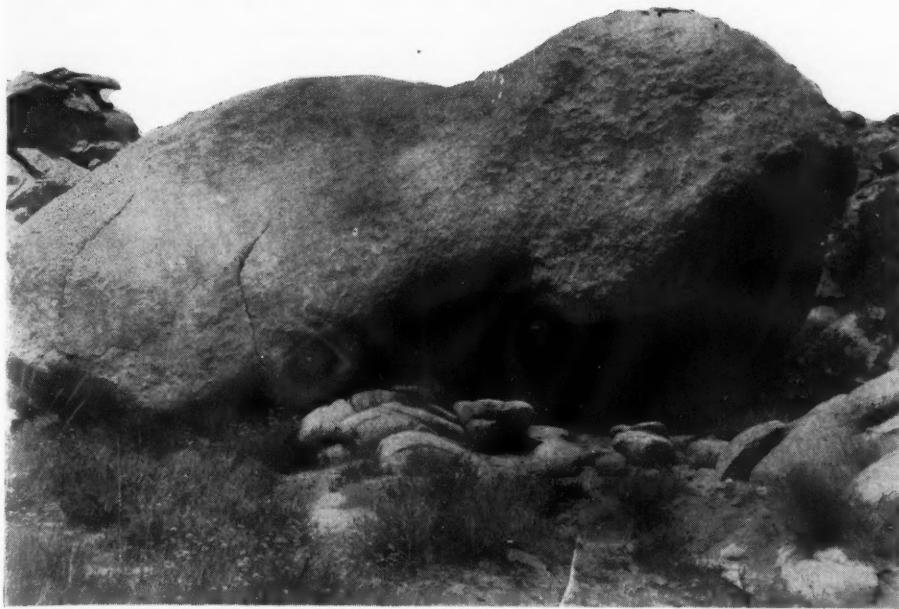
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Mysterious Cave in California Who can identify this spot?



Prize Announcement

In the mountains on the western rim of the Southern California desert is the cave pictured above. A faint trail leads from the nearest paved highway and the place is often visited by hikers. There is an interesting legend connected with this cave and the mysterious people who formerly used it as a rendezvous—and perhaps there is some truth in the stories.

Desert Magazine readers will want to know more about this mysterious cavern. In order that the best available information may be printed in this magazine a prize of \$5.00 will be paid to the person

who identifies the picture and gives the most accurate directions for reaching it, and the most complete report of its legendary history. If the contestants care to do so they may submit a rough map of the route and location. The story is limited to 500 words.

Entries in this contest should be in the office of the Desert Magazine not later than November 20, 1939, and the winning story will be published in the January number. This contest is open to all readers of the magazine regardless of place of residence.

MINE THAT HAS EVERYTHING ... EXCEPT GEM STONES

Continued from page 28

foot wall, kidneys of lepidolite, rosettes of albite, and an abundance of black and colored tourmaline frozen into the solid rock. But with all these favorable indications—no gem pockets were encountered. What might have been a good commercial gem mine is merely a fine study ground for amateur prospectors and mineralogists. Nature plays strange pranks sometimes.

Collectors who follow the Desert Magazine field log to these claims should understand that they will find no good cutting material here. However, they will have an excellent opportunity to study the elements of a promising vein.

For those who do not care to go into

the scientific side of the subject there are plenty of specimens containing mica, lepidolite, black and green tourmaline that sparkle in the sun and will make a showy addition to the mineral collection or rock garden.

These claims are located in the heart of a desert area that has both scenic and historic attractions. The heavy rains in September have given the desert healthy coloring. The landscape is bright and clean and untrammeled. The old Butterfield stage coaches followed the floor of Mason valley less than a mile from the spot where these claims are located.

Gem hunting is doubly enjoyable if you know at least a few of the common botanical specimens. When you become acquainted with them and their peculiarities you will always be among friends whether you find any sparkling crystals or not.

Weather

SEPTEMBER REPORT FROM U. S. BUREAU AT PHOENIX	
Temperatures—	Degrees
Mean for month	82.4
Normal for September	82.7
High on September 1	110.
Low on September 29	59.
Rain—	Inches
Total for month	5.41
Normal for September	0.75
Weather—	
Days clear	18
Days partly cloudy	4
Days cloudy	8

J. M. LANNING, Meteorologist.

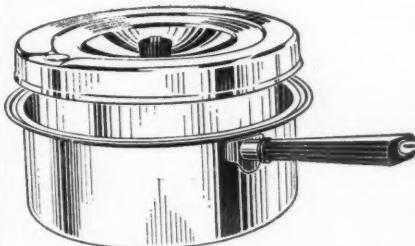
FROM YUMA BUREAU

Temperatures—	
Mean for month	83.2
Normal for September	83.7
High on September 1	112.
Low on September 27	60.
Rain—	Inches
Total for month	5.13
(greatest for September in 70 years)	
70-year average for September	0.40
Weather—	
Days clear	18
Days partly cloudy	6
Days cloudy	6
Sunshine	77 per cent (285 hours out of possible 371 hours, a new low record for September.)
Colorado river—September discharge at Grand Canyon	598,000 acre feet. Estimated storage September 30 behind Boulder dam 23,810,000 acre feet.

JAMES H. GORDON, Meteorologist.

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CACTI AND BOTANY . . .

- FIELD BOOK OF WESTERN WILD FLOWERS**, Margaret Armstrong. Handbook for both amateur and advanced botanists. Illustrated with pen sketches and 48 colored plates. 596 pages \$3.50
- CACTI FOR THE AMATEUR**, S. E. Haselton. By a ranking cacti authority. Color illustrations. Paper cover \$1.00, board cover \$1.50
- CACTUS AND ITS HOME**, Forrest Shreve. A readable book for cacti and succulent hobbyists. Illustrated. 195 pages \$1.50
- DESERT CACTI**, A. T. Helm. New edition of a unique booklet, illustrated with sketches 50c

HISTORY AND GENERAL . . .

- BOOKS OF THE SOUTHWEST**, Mary Tucker. 105 page bibliography. Paper bound 75c
- DEATH VALLEY**, W. A. Chalfant. Authentic history of the famous sink. 160 pages, ill. \$2.75
- DESERT OF THE PALMS**, Don Admiral. Scenic wonders of the Palm Springs region. 56 pages 50c
- DESERT ROUGH CUTS**, Harry Oliver. Short yarns about Borrego Desert characters, 6 1/4 x 9 1/2, 64 pages. Illustrated with cuts made by the author. Bound in boards, cloth back \$1.50
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- BORN OF THE DESERT**, C. R. Rockwood. Story of Imperial Valley's conquest 50c
- DATES AS FOOD**, Dr. Marko J. Petriak. Information for those seeking the foundations of correct living 25c

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- FIRST PENTHOUSE DWELLERS OF AMERICA**, Ruth Underhill. Life and customs of the Pueblos. 154 pages, profusely illustrated \$2.75
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BOOKS OF YESTERDAY AND TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

SAINTS AND SINNERS AND SCALP-HUNTERS IN ARIZONA

Phoebe Titus would be an unhappy misfit in the world today—but in that stirring period when Arizona was a rendezvous for white outlaws and every day was open season for Apache scalp-hunters, she was a natural leader.

This young lady who made pies, money and American history is the heroine in Clarence Budington Kelland's historical novel **ARIZONA**, published by Harper Brothers this year.

Phoebe and her father left their home in Illinois to seek a fortune in the California gold fields. The father fell ill and died at Tucson—and the daughter remained in squalor and lawlessness of the Arizona frontier because she had faith in the future of a land so rich in natural resources.

Those were fighting days in Arizona, and Phoebe played a man's game. No one suspected there was a spark of sentiment in her nature—until the civil war brought Peter Muncie into her life. It was a strange romance—but it stood the test when the crisis came.

Clarence Budington Kelland has presented a vivid interpretation of pioneer life in Arizona.

According to the philosophy of Phoebe Titus, "In this here kind of country there's got to be two kind of folk" There must be men to fight: hunters, trappers, prospectors to be forerunners, to discover the rivers and mountains and trails and wealth of minerals under the surface of the earth; and to fight for what they found. There must be others to venture in upon the heels of these first comers and root themselves and cling in spite of adverse nature and inimical savage—and with grim fortitude to develop that which will result in civilization, in towns, in mines, in agriculture. The two are different in nature, but inseparable, each useless without the other. Finders, fighters, clingers, builders! A foundation, these, upon which the nation builds its future."

No doubt there will be readers who will feel that Kelland has painted his frontier characters in too lurid colors—but if the virtue and villainy of his men and women are over-emphasized, the book still remains historically sound. And there are no dull sentences in this history. \$2.00. —R. H.

THESE ARE THE CLOWNS OF THE PLANT WORLD

The Abbey Garden Press at Pasadena, California has just released a concise, informative book for growers and collectors of succulents other than the cacti. From the same house last year came **CACTI FOR THE AMATEUR**, by Scott E. Haselton. The author has now edited and published a companion book, **SUCCULENTS FOR THE AMATEUR**, written by J. R. Brown, Alain White, Boyd L. Sloane and G. W. Reynolds.

A strange, fascinating assembly of 800 succulents is listed and described in the 172-page book. From the most unexpected sources come these odd members of the plant world. They masquerade in strange forms—living rocks, inchworms and reptiles, jewels and trees of jade, wax roses and desert stars.

SUCCULENTS FOR THE AMATEUR outlines the distribution, habitat and culture of the succulents, followed by detailed description of the plants listed by families. Its

authority is vouched for by the Cactus and Succulent Society of America, yet the botanical terms and relationships are so clearly set forth that today's beginner will find it an easy guide.

Chief among its assets is the profuse illustration, credited not only to Southlanders, but to cactus and succulent hobbyists from Australia to South Africa—a far-flung brotherhood. Of the 400 plants shown, 88 are in natural color. The photographs are of specimen plants and of garden and pottery arrangements. A number of detailed photos and drawings show structure and methods of propagation. Completely indexed. Paper cover \$1.55, art cloth \$2.05.

THEY CAME TO THE DESERT FOR RELIGIOUS FREEDOM

Treasurer hunters, explorers and emigrants who came to the basin of the Great Salt Lake in the first half of the 19th century found little there to attract them. Then in 1847 Brigham Young and his band of Mormon pioneers came over the mountain trails from the east and adopted the valley as their own.

A vivid history of this land—the region we know as Utah—has been written by Marguerite Cameron in **THIS IS THE PLACE**. The first edition of the book was published by the Caxton Printers of Caldwell, Idaho, in January, and a revised edition was released in August.

Since most of the history of Utah was made by the Mormons, the book deals mainly with the beginnings, migrations, persecutions and triumphs of this religious group.

Joseph Smith's vision, in 1820, came during a period when New York was the center of religious turmoil. The author follows young Joseph in his rise to leadership, tells how persecution drove his little band from New York to Ohio, to Missouri and then back to Nauvoo in Illinois. Smith was assassinated in 1844 and Brigham Young became the dominating figure in the Church.

In the spring of 1846 the Mormons set out again on their quest of a site for the New Zion. They blazed the famous "Old Mormon Trail" up the Platte river and arrived in July at the summit of Big mountain where they had their first view of the country Wilford Woodruff called "the land of promise, held in reserve by God as a resting place for his saints."

At the end of five years "Salt Lake City grew in grace and fruitfulness until it outclassed California and even old Mexico." The Deseret constitution was drawn up in 1849—the same year California took this step toward statehood—but Utah wasn't as fortunate as California in gaining statehood. When the name Deseret was discarded by the federal government, boundaries were changed and Utah admitted into the union as a territory a year later, the founders were sorely disappointed. Trouble between the two governments, one established by the Mormons and the territorial government set up by Congress was inevitable. Fighting dragged on for eight years.

In 1890 the church manifesto was issued decreeing abandonment of plural marriage. Six years later Utah became a state. "Forty-nine years it took Utah to prove up for statehood," the author observes.

Written in story form, the book is entertaining as well as informative. More than 60 photographs and maps illustrate the text. There is a roll of the pioneer Mormon band; bibliography and index. \$3.00.

DESERT ADVENTURES FOR THE SCHOOL CLASSROOM

Three desert school teachers combined their talents in the preparation of DESERT TREASURE, a juvenile novel in which an adventurous story of the western frontier is supplemented with a series of reading and study exercises for instruction in the elementary school class room.

The story is clean western thriller in which two lads in their teens are pitted against the villainy of an unscrupulous ranch foreman. With the help of a Chinese cook and an old Indian scout they expose the foreman as a member of a gang of smugglers—and bring him to justice after he has unwittingly aided them in the rediscovery of a lost gold mine.

The locale of the story is the Barstow-Yermo region of the Mojave desert of California. Living persons in that area, with fictitious names, provided some of the characters in the plot.

The distinctive feature of the book is its study exercises, designed as remedial instruction in reading and vocabulary. Teachers will find here something new and decidedly entertaining for their classrooms.

The story was written by Alice Richards Salisbury and her sister Irmagarde Richards, the lesson studies by Miss Irmagarde and Helen Heffernan, head of elementary education in the California school department. Mrs. Salisbury resided for many years at Daggett and is an enthusiastic devotee of the desert. Both Miss Heffernan and Miss Richards have taught in desert schools. The book is published by Harr Wagner of San Francisco. \$1.25.

NEW GUIDE BOOK FOR PALM SPRINGS VISITORS

Palm Springs has been so busy building a colorful desert resort it overlooked the important matter of providing a guide book which would enable visitors to go out and explore the many beautiful canyons and natural gardens to be found around and beyond the limits of the town.

But now a guide has been published—and a very informative and accurate one at that. William Mason and James Carling, writers, and Bee Nicoll, artist, have just issued WHERE SHALL WE GO? A GUIDE TO THE DESERT.

The 66-page booklet in paper cover logs 17 interesting motor trips out of Palm Springs, each with map and mileage table. The motor journeys range from the 2.6-mile trip to Tahquitz canyon, to a 296-mile excursion that includes the Pala mission and old Vallecito stage station.

In addition to the motorlogs, the book contains a brief description of the geography, geological history, climate, archaeology, flora and fauna of the Colorado desert.

It is a little book of fact, presented in an orderly and readable manner, and well illustrated by Bee Nicoll's sketches. Palm Springs visitors who want to become better acquainted with the desert that lies beyond the zone of neon lights and fashionable costumes will find this an invaluable guide book. 50 cents.

NOVEMBER COVER

This month's cover picture on the Desert Magazine is "Newspaper Rock" in the Petrified Forest national monument near Holbrook, Arizona. These strange symbols, typical of Indian markings found in thousands of places on the southwestern desert, were inscribed by an unknown race at an indefinite period in the past. Neither Indian nor scientist of today has been able to translate them with any degree of certainty. The photograph was taken by Dr. Warren F. Fox, El Centro, California. Dr. Fox studies archaeology as a hobby and has a fine collection of artifacts, acquired during his travels in the Southwest.

NOVEMBER, 1939

Mines and Mining . . .

Los Angeles, California . . .

Specifications of the U. S. treasury department procurement division must be modified if southwestern mines are to supply strategic minerals, according to the local chamber of commerce mining committee. Suggestion for a conference has been forwarded to Washington, for discussion of how western producers of chrome, manganese and other materials can be assisted in developing and producing these materials in the United States. Unless change is made in present restrictions, the government will be forced to buy from Turkey, Cuba and other foreign nations, it is asserted. Experts say the southwest has an abundance of low grade ores which could be reduced to briquets or concentrates, but high grade chrome and manganese cannot be supplied in lump as specified, the mining editor of the Los Angeles Times declares.

Virginia City, Nevada . . .

Fire, believed to have been started by lightning, wiped out last of the old-time famous mines of the Comstock Lode, when surface workings of the Consolidated Virginia and California were destroyed in the most spectacular blaze this community has known since the camp was burned in 1875. John Mackey, James G. Fair, James C. Flood, William S. O'Brien were bonanza kings of the 1870s when the C. V. & C. was at peak of its glory. Since the early 1920s the mine had not been worked. Now its structures, hoist and compressor, cable house, main hoist house, offices and outbuildings spread over several acres, are in ashes.

Tonopah, Nevada . . .

Nye county mining operators first six months in 1939 paid bullion tax exceeding \$15,000, an increase of approximately 56 per cent over the record for last half of 1938, according to a report from W. H. Thomas, sheriff and assessor. Greater activity in the Manhattan district is responsible for large part of the gain, although all sections of the county show increases. Manhattan gold dredging company handled 2,063,832 cubic yards of gravel from January 1 to July 1, 1939.

Mina, Nevada . . .

Production of brucite at properties 30 miles from Luning will be stepped up from present output of 90 tons daily, it is reported here. Installation of a roasting plant is planned by U. S. Brucite company, to dehydrate the ore, now being shipped to Cleveland and other eastern cities. The mineral is used in manufacture of monometal, various alloys, chemicals and other industrial products. War conditions are expected to increase demand.

Santa Rita, New Mexico . . .

Following higher price for copper and better demand, Consolidated copper corporation announced, effective October 1, hike of 10 per cent in wage scale for all mine, mill and smelter employees in Santa Rita and Hurley camps. Substantial addition is being made to working forces. Other major producers of the red metal have taken similar action. Their pay scale contracts are graduated according to price of copper.

Miami, Arizona . . .

At half a dozen mines in the Crysotile district asbestos production is experiencing a mild boom. Largest active mine is the Regal, handling 200 tons a month. From the Emsco 50 tons are shipped each month to Los Angeles, where it is prepared for market. Property owned by Johns-Manville corporation has been put into shape for resuming operation, after idleness dating to 1931.

Kingman, Arizona . . .

Two major Mohave county mines, the Boriana and the Tennessee-Schuykill, will be reopened because demand for lead, zinc and tungsten is stiffening as a result of the European war. At one time the Boriana was second largest producer of tungsten in the United States. After being shut down a year, work has been started by its owner, Molybdenum corporation of America. Payroll includes 125 to 150 men. Tennessee-Schuykill at Chloride has been closed since January, due to low prices for lead and zinc and uncertainty as to silver. When shut down 115 men were discharged.

San Francisco, California . . .

Every one of California's 58 counties contributed to production of 60 different mineral substances reported during 1938 with total value of \$380,444,976, according to a report from Walter W. Bradley, state mineralogist. This record tops 1937 by \$18,929,025. Petroleum showed greatest increase in value of output, with gold next. From 13,753 producing wells came 249,395,763 barrels of crude oil valued at \$258,354,343. Gold production amounted to 1,311,129 fine ounces, worth \$45,889,515, from 927 lode mines and 675 placer mines, not including snipers, prospectors and various individuals who sold small lots.

El Centro, California . . .

Modern machinery will handle placer gravels of the Mesquite district worked hundreds of years ago by Mexicans and Indians, 50 miles northeast of here. In a desert region "noted for its lack of water" as one writer describes it. The Desert gold and aluminum corporation of Washington has drilled water wells, placed contract for \$30,000 worth of 10-inch pipe, and is preparing to wash 90 cubic yards of gravel an hour. Leases have been taken on 2000 acres. Gravel will be put through a trommel which dumps coarser materials automatically. Finer residue goes through a 3/4-inch screen, into sluice boxes and over three sets of jigs. Concentrates are retorted into bricks after being put through an amalgamator. Mesquite mining and milling company is operating 100 claims in this area, reporting rich gravel in a 200-foot shaft. Sixty miners are now employed in the district.

Laredo, Texas . . .

Within a few days more than 100 cars of lead have been shipped from Mexico through border ports of entry, destined to England and France. Forty-five cars of the metal passed through here in one day. War has stimulated Mexico's mining industry generally, according to reports from many districts below the international boundary.

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HERE AND THERE ... on the Desert

CALIFORNIA

Coachella . . .

Riverside county supervisors have adopted an ordinance giving permanent status to wildflower reserves in Coachella valley, thus protecting desert flora which annually attracts thousands of tourists. Local enactment follows action of the state legislature authorizing establishment of protected areas.

Death Valley . . .

Homefolks here receive with reserve a report that a newspaper man has uncovered the secret of Death Valley Scotty's fabulous wealth. Story goes that reporter and photographer on an expedition in vicinity of Scotty's castle in Grapevine canyon found an aged prospector who told them he had guarded Scotty's secret for 35 years. Now he tells all: the truth, he avers, is that Scotty has been buying ore from a mine in the Panamint range overlooking this famous sink. Source of Scotty's gold has ranged in theory from a hidden mine to purse of his partner, A. M. Johnson, retired millionaire. Most people believe Johnson provides the old desert rat with spending money he scatters lavishly.

Borrego . . .

A 12-month armistice in the controversy over the expansion of Anza state park is indicated in a letter to San Diego county supervisors from Fred W. Johnson, U. S. land commissioner at Washington, D. C. California will ask for no more patents on government land during the next year, pending a study of the proposed park area, Johnson wrote. Supervisor Walter Bellon has been leading the fight against enlargement of the desert park, declaring it will close potentially valuable mineral and farming lands. Proponents of the park project deny Bellon's statement. "Lands having any productive value already have been privately acquired," they say, "and will not be included in the park."

Independence . . .

Death Valley's Skidoo News of April 25, 1908, carried only one news story, under a banner "MURDER IN CAMP, MURDERER LYNCHED WITH GENERAL APPROVAL." According to the News, saloonman Joe Simpson held up respected banker Jim Arnold, the banker was shot and killed. Enraged citizens overpowered a sheriff's posse led by deputy Henry Sellers, held a public lynching. Copy of the News has been presented to the Eastern California Museum association, together with gun owned by Simpson, picture of the hanged man and piece of the rope used to hang him.

Indio . . .

Date picking and packing was well under way in Coachella Valley early in October. Total pack is expected to be considerably larger than last year, when 6,603,456 pounds of dates were harvested, a short crop due to killing frosts. Small carryover, reduced importations because of war conditions will assure growers better prices, according to the marketing organization controlling 85 per cent of valley production. Choice new crop soft dates retail now at 50 cents per pound. Expecting record harvest, California date growers association, largest date packing plant in the world, has nearly doubled capacity. Rain damage cut original estimates of 11,000,000-pound crop for 1939.

El Centro . . .

Imperial valley's all-American canal as originally planned is all completed now except one structure at the Alamo river, according to U. S. reclamation bureau announcement. However, the canal will not be available for several months owing to the necessity of clay-lining a section of several miles to prevent damage from seepage in the Bard area.

ARIZONA

Casa Grande . . .

Largest known organ pipe cactus in Arizona is an isolated specimen growing north of Red Rock and more than 100 miles from boundary of Organ Pipe national monument. Its 22 arms are 14 feet high. Biggest specimen in the monument has 17 arms averaging 11 feet high. Park naturalist Dale King says plants frequently attain maximum growth in northern limits of their range. This giant cactus was discovered by a prospector who reported it to the Boyce Thompson Arboretum.

Phoenix . . .

To supply quail and other game birds with water in remote Arizona districts the state game and fish commission considers plan to establish 200 artificial water holes. William Sawtelle, game warden, says 50-gallon drums equipped with poultry valves should do the trick. He thinks deer hunters will be greatest threat to success of the program. "Galvanized tanks make excellent targets," Sawtelle declared. "We appeal to all hunters to resist desire to shoot at them." One 50-gallon tank should supply water for several hundred birds nearly a year, the warden believes. Poultry valves are attached to a five-foot section of pipe near the ground. Birds peck at the valves to obtain moisture.

Flagstaff . . .

Young people of the Havasupai, living at the end of 15 miles of pack trails in the bottom of a Grand Canyon tributary want Uncle Sam's aid in home building on their reservation, smallest in the nation. Tribal territory includes only 500 acres at the foot of red and cream cliffs towering 2500 feet above cultivated small farms. Petitioners ask for cement to construct stone houses, for equipment to work their patches of land.

Flagstaff . . .

New style Navajo-woven rug is hailed here as important development in Indian crafts. Made for Gouverneur Morris, an inch thick, two-tone product of the hand loom has been described as similar to Chinese weaving which sells for \$7 to \$9 a square foot. Observers believe Navajo costs may be held to \$1.50 a yard.

Flagstaff . . .

Indian traders will not be required to pay sales taxes, if recommendation of D. C. O'Neil, chairman of Arizona's state tax commission is approved. O'Neil and other state officials came here to discuss this problem with northern Arizona traders. O'Neil asserted the move to collect sales taxes from Indians is intended to force inclusion of Indians in the state's social security set-up and make them eligible for old-age pensions. U. S. department of interior ruled Indians should pay the tax.

Holbrook . . .

Navajos will miss sage counsel of White Hat, famous singer of old-time tribesmen, one of the last of the mountain men, who died recently, aged 65. Because no Navajo would touch the dead, White Hat's wife and children begged white friends to help. By automobile the body was carried to the home of White Hat's forefathers in the mountains near Canyon de Chelly. There the corpse was laid on a smooth rock. A new white hat was placed on his breast, food and tobacco left nearby, two fine horses were slaughtered at the spot, to serve their owner in the happy hunting grounds and several hundred small rocks were heaped over the body. This, says Mrs. White Mountain Smith in her account of the ceremony, is the most honorable of 13 modes of Navajo burial.

Grand Canyon . . .

One of three naturalists on the Byrd expedition to the Antarctic will be Herwil M. Bryant, eldest son of Dr. H. C. Bryant, superintendent of Grand Canyon national park. This is second time a park service naturalist has been selected for Byrd's southern migration.

Tucson . . .

Story of 1900 years of climatic history, studied in thousands of trees, is told in 850 photographs of tree rings sent by Dr. Andrew E. Douglass to the clipping service of the federal department of agriculture. Trees were used for photographs in Arizona, New Mexico, Colorado and California. Dr. Douglass, internationally known specialist whose tree-ring calendar won worldwide fame for its originator, says in his photographs every ring, especially those after 200 A. D.—shows up in 12 to 15 trees. He insists on necessity of finding duplicates of all rings for cross-dating and corroboration of weather records they reveal.

Nogales . . .

Fifteen monuments, each the tiny figure of a priest standing in a niche of native stone, will be erected in five counties of southern Arizona along El Camino de los Padres, the route followed by the fathers of mission days. Three locations will be used in each county, Santa Cruz, Pima, Pinal, Maricopa and Yuma; on U. S. highway 89 from Nogales to Tucson; on highway 84 from Tucson through Casa Grande to Gila Bend; on highway 80 from Gila Bend to Yuma. Arizona highway department and national youth administration sponsor the project.

NEVADA

Las Vegas . . .

Sightseeing passengers on a boat enroute from Boulder dam to lower reaches of Grand Canyon recently surprised a mountain lion which had just killed a rare specimen of sand dune deer, saw the lion tearing at the deer's throat, and in the background another deer and mountain sheep. Pilot Fred Hiltz made a landing, scared the lion away, went ashore with his boat party. A physician examined the lion's victim, said it had been dead about seven minutes.

Carson City . . .

Non-resident permits issued to out-of-state motorists in 1940 will carry this legend on windshield stickers: "Nevada, one state without an income tax, a corporation tax, an inheritance tax, a gift tax, a sales tax—with cheap power and liberal mining, corporation, taxation and other laws. Welcome to Nevada."

Las Vegas . . .

I. C. C. hearing is scheduled here for November 20 on application of Grand Canyon-Boulder Dam Tours, Inc., for operation of seasonal tours over nine routes in Nevada, Arizona, Utah and California. Between May and November the Boulder City firm would transport persons, light express and newspapers on following lines: Las Vegas and Boulder dam recreational area; Kingman, Arizona and area, via Boulder City; Moapa, Nevada and area, via Lost City, Nevada; Pierce's Ferry junction, Arizona and area, via Pierce's Ferry, Arizona; Hackberry, Arizona and area, via Pierce's Ferry; Needles, California and area, via Boulder City; Lost City and Pierce's Ferry road, Nevada; St. George, Utah and area, and Kanab, Utah and area.

Carson City . . .

Nevada has 284 registered physicians and 70 per cent of them, perhaps highest average for any state in the union, are members of the American medical association, according to report by Dr. John E. Worden, secretary of the state board of medical examiners. Twenty Nevada M. D.'s have practiced more than 40 years, the oldest doctor still active in his profession was born in 1852.

NEW MEXICO

Santa Fe . . .

At the state penitentiary work has started on New Mexico's 1940 motor vehicle license plates, black numerals on red background, the colors of Spain. Prison workers will turn out 90,000 passenger car plates carrying the line "Coronado Cuarto Centennial."

Albuquerque . . .

Pistol toters, wearing belts filled with cartridges when they went to the state fair here were warned by Donald Moses, assistant district attorney, to leave their weapons at home. Dressing up in the western spirit is OK, Moses announced, but it's dangerous as well as unlawful to carry guns, the lawyer reminded New Mexicans. "Leave your guns at home," he advised. "That's the best way to avoid trouble."

Santa Fe . . .

Headquarters here will be set up for national park service survey of historic sites, measuring and photographing important buildings in danger of demolition. Biggest single survey completed was "measuring and blueprinting of 100 pueblo houses composing Acoma, historically fortified city atop a 360-foot high mesa in New Mexico, which long defied capture by Spanish conquistadores." Money for Historic American Buildings survey comes from transfer of \$124,500 by PWA.

Gallup . . .

Despite decline in attendance at southwestern monuments and parks, visitors to Canyon de Chelly on the Navajo Indian reservation increased more than 150 per cent in July, says the national park service. General reduction in patronage at other points was charged to two world's fairs. New Mexico editorial writer suggests perhaps charges recently put into effect at federal monuments and parks had some effect. There has been no drop in tourist travel in New Mexico.

UTAH

Delta . . .

Astonished was Mrs. Violet Stoddard when she opened the flour bin in her kitchen and found a rattlesnake inside. The housewife's son killed the reptile.

Jensen . . .

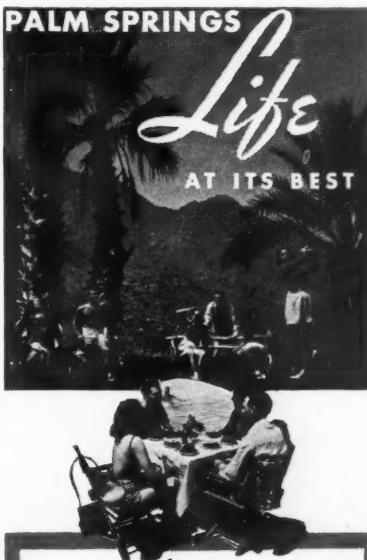
In a 35-pound canvas canoe Charles F. Mann, 29-year-old York, Pa., taxidermist, stopped here briefly on his way to the Grand Canyon, Lake Mead and the mouth of the Colorado river. In 10 days he voyaged in a frail 14-foot kayak 200 miles down the Green river from Green River, Wyoming. Twice his craft capsized in Lodore canyon, but he salvaged boat and all equipment. At this point Mann was half way to the junction of Green and Colorado rivers, a stretch of 200 miles walled in by precipitous cliffs with many dangerous falls and rapids. Nobody has ever completed the trip to Lake Mead in a light canoe, although others have made the attempt. On October 1, Mann arrived safely at Green River, 150 miles south of here. He looked tired and worn. Next scheduled stop is Lee's Ferry, 300 miles down river.

Vernal . . .

Utah motor vehicle plates will be made at state prison, where order has been placed for 167,565. Numbers will be assigned by districts, as an aid to identification of cars.

Kanab . . .

Filming of "westerns" has brought prosperity to this village, because it is close to varied types of forest, canyon and desert territory. During past summer it is estimated motion picture production added an income of \$200,000 to the community of 1300 residents.



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GEMS AND MINERALS

This month the Desert Magazine starts a new department—a section written for those who are interested in geology, gem and mineral collecting, rock gardens and kindred subjects. These pages are to be edited by Arthur L. Eaton, veteran collector and lecturer, and are designed to interest both amateurs and advanced students.

Mineral societies of the Southwest are invited to send in news of their field trips, exhibits, rare finds and other items which will be of interest to other collectors.

Gem and mineral collecting is a fascinating hobby—especially for those who have access to the desert where there is an inexhaustible field of new material. The staff of the Desert Magazine extends greeting to members of the "rockbound" fraternity and invites criticism and suggestions from those who are interested in this new department.

LOS ANGELES COLLECTORS TO HAVE NIGHT CLASSES

"Trips Afield" is the title of a geology course being given this fall by the extension division of the University of California in Los Angeles. The class meets in the evening at Room 812 at the downtown classroom center at 815 S. Hill street.

Four field trips are planned during the school year and the class is open to anyone interested in the study and collecting of rocks and minerals. Dr. Robert W. Webb is instructor.

• • •

IMPERIAL SOCIETY TO CAMP AT CHUCKAWALLA WELLS

Imperial Valley Gem and Mineral society, meeting monthly at El Centro, California, has scheduled two field trips for its fall season. The first on October 22 is to include Travertine rock and the Rainbow rock area in the eastern end of Santa Rosa mountains.

The second trip will be an overnight camping excursion to the geode fields near Chuckawalla wells November 11 and 12. This area has been a happy hunting ground for collectors for many years and has produced many fine geodes.

The Imperial valley club meets alternate Tuesday evenings in El Centro and always has money in its treasury despite the fact that members pay no dues. Funds are raised by occasional auctions of stones contributed by the members.

• • •

COAST COLLECTORS PLAN MINERAL EXPOSITION

BY BLANCHE L. ANDERSON
Editor, Pacific Mineralogist.

Next field trip of the Los Angeles Mineralogical society is to be the Santa Rosa mountains, according to the announcement on September 21 when the society opened its fall season with a well attended meeting.

Members were entertained at the September meeting by Donald Mulvey with motion pictures from Death Valley, also pictures of one of the society's three-day field trips on the desert. This showed members gathering specimens—also some of the joys and problems of camp life.

According to the president, Dr. John Herman, January 14 and 15 are the dates tentatively set for the mineral exposition to be held in the chamber of commerce building. Many mining and engineering organizations are planning to have a part in the exhibits.

Misnamed Minerals

1. "Smoky Topaz"

"Smoky Topaz" is a name commonly known, and very generally used, among jewelers and gem cutters. Some of them really believe it to be topaz, others unscrupulously use the term to increase sales.

The stone itself is really deserving of its own place in the list of beautiful gems. It is a member of the great quartz family and should be cut and sold as "Smoky Quartz." The color is probably due to radium emanations in the ground. It varies from pale yellow to almost black, in proportion to the frequency of the rays. The black color is often changed to good topaz amber color by slow heating and cooling. Smoky quartz is too beautiful as a gem to masquerade under any other name than its own. Other names in use at the present time are "Cairngorm," "False Topaz," "Spanish Topaz" and "Scotch Topaz."

• • •

DON'T'S FOR MINERAL COLLECTORS

(Adopted by California Federation of Mineralogical Societies)

DON'T—collect minerals on private property without permission unless positive that permission is unnecessary.

DON'T—fail to show appreciation for courtesies extended by owners of mineral properties.

DON'T—interfere with equipment at unguarded mines or quarries.

DON'T—unnecessarily destroy specimen material at the deposit. What may be inferior to you, others may be glad to collect.

DON'T—clean out a mineral deposit just to keep the other fellow from getting some.

DON'T—abuse the other fellow's confidence by spreading news of a mineral "find" which he has asked you to keep secret.

DON'T—handle the other fellow's specimens without permission.

DON'T—forget the Golden Rule, "Do unto others as ye would have others do unto you."

The DESERT MAGAZINE

DO YOU KNOW THAT TURQUOISE—

—jewelry is the oldest jewelry found? Sir Flinders Petrie, famous archaeologist, found carved turquoise bracelets in an Egyptian tomb dating back to 5500 B. C.

• • •
—presents were given to Cortez by Montezuma, ruler of the Aztecs, because he believed Cortez to be the god Quetzalcoatl, who taught the Aztecs how to shape turquoise?

• • •
—suspended on a string and held inside a glass would strike the hour, or so the Europeans of the Middle Ages believed?

• • •
—was not set in silver by the Indians of Arizona and New Mexico until about 1880? The old Navajo bracelets were made of deer horns which were boiled and bent into shape. Holes were drilled in them with bone awls and bits of turquoise glued in with piñon gum. Turquoise was also used in mosaic earrings, disc-like beads and rough pendants.

• • •
—owes its color to the copper in its molecule? It is a phosphate of aluminum and copper with small quantities of iron and is found only in regions of barrenness and aridity.

• • •
—was mined by Isaac, father of Israel of Biblical times, at Nishapur, Iran, formerly Persia? The national stone of Iran, the Iranian term for turquoise is "firozah," which means "victorious." The greatest turquoise mines in the world are at Nishapur, Iran, which have produced continuously since Biblical days.

• • •
—changed color when danger threatened the owner, according to the belief of the Middle Ages? "The Turkeys doth move when there is any peril prepared to him that wareth it."

PUBLICATIONS FOR THE GEM AND MINERAL COLLECTOR

For members of the mineral and gem collecting fraternity who desire to keep fully posted as to the world-wide developments in this field, the Desert Magazine recommends the following:

PACIFIC MINERALOGIST, Blanche L. Anderson, editor. Published semi-annually, 4918 Riverton Ave., North Hollywood, California. 20 cents a copy.

THE MINERALOGIST MAGAZINE, H. C. Dake, editor. Published monthly at 701-4 Couch Building, Portland, Oregon. \$2.00 a year.

ROCKS AND MINERALS, Peter Zodac, editor. Published monthly at Peekskill, N. Y. \$2.00 a year.

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PLANTS

BEFORE STORING PLANTS for winter I am offering cuts of my Epiphyllum collection (Phyllocacti) for sale at 20c per cut. With reasonable care they should be plants ready to bloom by spring. Have no catalogue but all are of new or very little known and best varieties. Young plants at 50c each. But F. O. B. Los Angeles. H. M. Wegener, Collector of Phyllos. 1190 Leighton Ave., Los Angeles, Calif.

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GEMS AND MINERALS

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POINTS OF INTEREST

CATHEDRAL CITY, California, is a small nicely situated village; quiet and inexpensive, where you learn to love the desert. See W. R. Hillery.

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BOOKS

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BOOKS for gem and mineral collectors. May be obtained by addressing Desert Crafts Shop, 597 State St., El Centro, California. See listing and prices on page 40 of this issue of Desert Magazine.



DESERT QUIZ ANSWERS

Questions on page 15

- 1—Death Valley.
- 2—Yucca.
- 3—Pottery.
- 4—Utah.
- 5—Hopi.
- 6—Hardness of minerals.
- 7—Billy the Kid.
- 8—Imperial valley.
- 9—Tucson.
- 10—Food.
- 11—Never again tell the truth.
- 12—Control the flood waters of the Colorado river.
- 12—Sandstone.
- 14—Salt River valley.
- 15—Superstition mountains.
- 16—Silver.
- 17—Quartz.
- 18—200 years.
- 19—Coolidge.
- 20—Presidential order.

Desert Place Names

Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, to Margaret Hussmann of Nevada and Hugh F. O'Neil of Utah.

ARIZONA

ADAMANA

Apache county
Station on A. T. & S. F. rr 25 miles east of Holbrook on north bank of Rio Puerco. Established circa 1890 as a point from which tourists could visit petrified forest to the south. Barnes says every writer visiting the forest has undertaken to weave a romance about the name Adamana. Several traced its origin to a settler named Adam and his wife. Lillian Whiting in The Land of Enchantment said it's a corruption of "adamant," others wrote stories equally fanciful. Fact is, says Barnes, in early days (1879-1890) two partners, Jim Cart and Adam Hanna grazed several thousand sheep in the vicinity. Their headquarters ranch was south of the Puerco opposite present railroad station of Carrizo. Driving from the sheep camp at the petrified forest one December night in 1885 Mrs. Cart and two small children were caught in a blizzard. Abandoning the team they took shelter under an overhanging bluff. There they were found frozen to death, almost in sight of home. Hanna married in Holbrook a young woman whose name was Maggie, not Anna. Railroad official coined name from old Scotsman's two names, Adam Hanna. Hanna died long years ago, is buried in the little campo santo at Holbrook.

CALIFORNIA

YUHA WELL

Imperial county
Near here while prospecting in the 1880s the Breedlove party perished from heat and thirst. Roy Breedlove, son of the man who lost his life in that tragedy, today is a prominent and respected resident of Imperial county. Jasper says he never has been able to find the meaning of the word Yuha, or who first applied it to this water hole on the desert. (For Yuha valley see Desert Magazine place names June 1939). Located a short distance north of the international boundary, the well is in Yuha valley in the western part of the county south of U. S. highway 80 and southeast of Coyote Well. Oyster shells "big as dinner plates" are found here. In 1901 San Diegans organized the Yuha well oil company, installed a drilling rig and spudded in a well. Charles H. Swallow, then a San Diego county supervisor, was superintendent and general manager. After a year's prospecting they found no oil and the project was abandoned.

NEVADA

PANACA

Lincoln county
Named for Mormon settlers from Indian word panacar or panagar, which means money, according to William Palmer. Word also means iron, copper, silver or other metals. When old mining camp Bullionville was set up and Indians saw metal extracted from rocks they called camp "Panacar." Mormons adopted tribesmen's choice.

ELKO

Elko county
Name given to the settlement by Charles Crocker, one of the directors of the Central Pacific railway, who added an "o" to

For the historical data contained in this department the Desert Magazine is indebted to the research work done by the late Will C. Barnes, author of "Arizona Place Names;" to Betty Toulouse of New Mexico, to Margaret Hussmann of Nevada and Hugh F. O'Neil of Utah.

the word "elk." A great number of these animals roamed the nearby hills at that time. The C. P. reached Elko in 1868. Elko county was created from a part of Lander county.

NEW MEXICO

SANTA FE (Santa Fay) Santa Fe county
La Villa Real de la Santa Fe de San Francisco de Assisi (The Royal City of the Holy Faith of Saint Francis of Assisi) was founded and named in 1610 by Don Juan de Peralta according to some historians. Others claim it was settled earlier (1605) and named by Don Juan de Onate. In 1598 Onate led the first Spanish settlers into the Rio Grande valley, establishing them along the river and his first capital at San Gabriel, New Mexico. In 1605 or 1610—as you prefer—the capital was moved to the town now known as Santa Fe. Indians and Spaniards lived peaceably together until 1680 when Indians rebelled against the intruders and killed or drove out all of them, survivors fleeing to El Paso del Norte. Twelve years later Don Diego de Vargas was appointed governor general of New Mexico. Following his reconquest of Santa Fe in 1692 the Spanish moved in again. After 1821 New Mexico was ruled by the Mexican regime and Santa Fe became the most important center in the west for trade as well as gay social life. At that time the Santa Fe trail was made famous. In 1846 New Mexico became a territory of the United States and American military occupation in Santa Fe continued for five years. The famous palace of governors ceased to be a seat of government in 1885, after having served in that capacity since the early 1600s. However, it was the governor's residence until 1910. New Mexico gained statehood in 1912 with Santa Fe as state capital.

UTAH

MAGOTSA

Washington county
Old emigrant trail to California ran from Cedar City west through Iron springs pass, up the desert past the present-day sites of the towns of Newcastle and Enterprise, over the hills to Mountain Meadows, thence across the southern divide and down the slope to Magotsa. Indian word is Ma-hau-tsa, and means the end of a long slope, according to William R. Palmer.

KANOSH

Millard county
Town in Pahvant valley on Zion park highway. Settled in 1868 by W. C. Penny. Named for a Pahvant Indian chief, whose tribe was converted to Mormonism. It is said that after his conversion Kanosh's skin gradually became whiter until he was almost like a white man. Settlement was first called Corn creek because the Indians grew corn there.

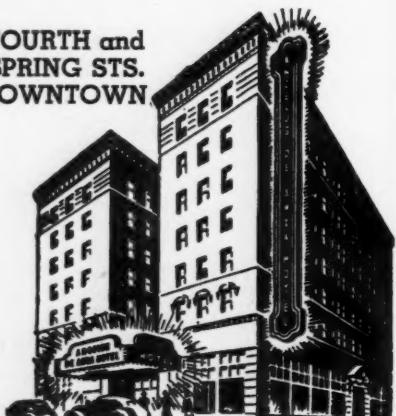
PARLEY'S CANYON

Salt Lake county
This canyon was named for Parley P. Pratt, who opened the first road through it. First geological board in Utah, August 22, 1847, Brigham Young, chairman, bestowed name "Big canyon creek." By common consent this was changed to "Parley's Golden Pass" and later to "Parley's canyon."

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HARVEST CAMP IN THE NAVAJO FOREST . . .

Continued from page 32

Bear people get angry when the Navajo copy them."

Each day grew colder. Slate colored backdrops dulled the northern sky. One morning we awoke with the wind howling and our tent swaying. When we went outside minute particles of ice pricked our faces. Grey-black clouds were gathering in the northwest.

We saw Old Lady Sam come out of her tent and sniff the air. She ducked inside and we heard her yell. "The prairie dogs and Hopi were right. They went into their holes early. There is going to be a big snow this winter. It's coming right now. Stir yourselves, my daughters. Start breaking camp. Let us get off this mountain. We must not be snowbound."

Old Lady Sam knew by bitter experience. Early snow had caught her near Bear Tank in 1932. Her outfit almost starved and froze to death. Only the bundles of food and clothing dropped from the air by bombers from March Field, California, saved the Navajo.

When the heavy snows again fell in 1936 the old lady had her family warm in their winter hogans near Fort Defiance. Temperatures plummeted to 30 below zero that year. Many Navajo were marooned between Zuni pueblo and the Magdalena mountains in Socorro county, New Mexico. Aerial scouting by E. R. Fryer, superintendent of the Navajo, located them. Their "wildcat" truckers had deserted them or were snowbound themselves. Indian service trucks loaded with food and clothing pushed through the high drifts to succor them.

By mid-morning our cavalcade of wagons and horsemen strung out through the forest. By noon the wheels of the wagons were crunching through the newly fallen snow that covered the frozen floor of the forest. The pines were laced in white. At twilight we passed from the forest. Below us patches of snow mottled the hazy expanse of Black creek valley. Behind the ragged black grimness of Black Rock a rising column of coal-black smoke swirled far into the dusky winter sky. There lay Fort Defiance and home. The piñon harvest of 1938 was over.

Special Merit

In addition to the September prize winners shown on page 2 the following photographs were selected as having unusual quality:

"Wild Burros" by Rose Wilson, Whittier, California.

"Storm Clouds" by James Jenkins, Los Angeles, California.

Writers of the Desert . . .

Among the many writers who have contributed material to the Desert Magazine, none can claim as many years of continuous residence on the desert as GEO. E. PERKINS of Overton, Nevada, whose "Trail of a Renegade Pahute" in this issue is an authentic record of one of the most thrilling manhunts in the history of the Southwest.

George Perkins was born on the desert, his parents having moved to southern Nevada in October 1881. His only schooling was in a one-room tent. Most of his boyhood companions were Pahute Indian boys — and they have been his loyal friends all through life.

"I wanted an education," George said to the editor of Desert Magazine, "and after getting an elementary schooling in reading, writing and arithmetic in that little tent, I continued to study when I could at the campfire in the cattle camps, and on the road when I was freighting."

George served as deputy sheriff in Clark county, Nevada, for many years, and later was justice of the peace at Overton. He resides there today as a private citizen. He knows every trail and water hole in the southern Nevada region and was keenly interested in the archaeological excavations at Lost City before they were submerged in Lake Mead.

It is especially gratifying to the staff of the Desert Magazine to have contributions from frontiersmen who are as genuine as George Perkins.

ELIZABETH LEWIS, whose five-day trip to the summit of White mountain is told in this issue of the Desert Magazine, was initiated into the fraternity of desert dwellers in 1928 when she and her husband were married and took over the management of an old-fashioned country store on the Mojave, 22 miles from town. There they remained seven years.

Mrs. Lewis is a native of Maryland and came to California when she was 13. She attended South Pasadena high school and studied art at the University of California in Los Angeles. Although she is now a resident of Los Angeles where she designs textiles, wallpaper and magazine covers, she prefers the outdoors and is an active member of the Sierra Club of California. "I live in the city," she remarks, "but I have never become entirely civilized according to city standards."

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GRACE P. NICKERSON who has written about Kangaroo rats this month for Desert Magazine readers, studies desert rodents purely as a hobby. She is practicing physician and surgeon in Los Angeles, specializing in ear, nose and throat ailments.

When there is an opportunity to get away from her office for a few days she usually motors to the desert country and has traveled most of the highways and byways from Mono lake to the Mexican border. For three years she was secretary of the Zoological Society of Los Angeles and now is registrar for the Los Angeles branch of National League of Pen Women, and an active member of the Southern California Woman's Press club.

Prizes to Amateur Photographers

Each month the Desert Magazine offers two cash prizes for the best camera pictures submitted by amateur photographers. The first award is \$5.00 and the second \$3.00.

Pictures are limited to desert subjects, but there is no restriction as to the residence of the photographer. Entries may include Indian pictures, rock formations, flowers and wild animals, canyons, trees, water holes—in fact anything that belongs to the desert country.

Following are the rules governing the photographic contest:

1—Pictures submitted in the November contest must be received at the Desert Magazine office by November 20.

2—Not more than four prints may be submitted by one person in one month.

3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

4—Prints must be in black and white, $2\frac{1}{4} \times 3\frac{1}{4}$ or larger, and must be on glossy paper.

Pictures will be returned only when postage is enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the November contest will be announced and the pictures published in the January number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.



Just Between You and Me

By RANDALL HENDERSON

"We would like to feel that these pages will impart to our readers some of the courage, the tolerance and the friendliness of the desert — that this issue and every issue of the Desert Magazine will be like a cool spring of water at the end of a hard day's trek—and that you will go along the desert trail with us and find the journey worth while."

The above paragraph is reprinted from the "Just Between You and Me" page of the Desert Magazine in our first number in November, 1937.

And now we have traveled the desert trail together for two years. This is our second birthday number. For our magazine staff it has been a fascinating adventure—made doubly enjoyable by the interest and loyalty of our readers.

We have explored the Indian country. We have hiked over barrancas and up the steep slopes of the desert mountains in search of hidden springs and colorful gem stones. We have prospected for gold and rare minerals. We have found exquisite beauty in remote canyons—and gorgeous flowers on the mesas and dunes. More interesting than all else were the fine people we met along the way—the prospectors, traders, homesteaders, scientists, teachers, pioneers, professional men and women—the kind of folks who are more devoted to the art of living healthful, useful lives than the acquiring of material riches. Such people are the salt of the earth—and it is a constant source of inspiration to the editorial staff of the Desert Magazine to know that we have won the confidence and friendship of this kind of people.

* * *

This month we begin our third year. Our companions of the trail—the subscribers and newsstand buyers — have increased to nearly 8,000. For the coming year we are planning many new features. There is no lack of material for such a magazine as this. Interesting manuscripts and rare photographs come in every day's mail. We need more pages—and they will be added as rapidly as circulation and advertising revenue will permit. Believe it or not—the primary goal of the Desert Magazine is not the accumulating of gold.

Workmen are now pouring the foundations for a new building for our office and printing plant. The structure is patterned after the design of the desert's first architects—the

pueblo dwellers of the Southwest. We expect to begin 1940 in our new quarters.

* * *

This month the Desert Magazine adds a new department for the "rockhounds"—the gem and mineral collectors and the rock garden enthusiasts. In December the monthly features on desert botany will be resumed—with Mary Beal of Daggett, California, as our staff botanist. As soon as space will permit we want to add a special department for the cactus and succulent societies and collectors. There's a big fraternity of them—and their hobby was born in the desert.

* * *

A year ago I suggested that later the Desert Magazine would add fiction to its contents. I've changed my mind about that. Or rather, the readers have changed it for me. I have a big file of letters protesting against the idea. Apparently a very large percentage of our subscribers are more interested in fact than in fiction—at least as far as the Desert Magazine is concerned. Frankly, that suits me better, too.

* * *

And now I have used nearly a whole page talking about the Desert Magazine and its readers and contributors. Pardon me, if I have talked too much about ourselves—but a birthday anniversary comes only once a year, you know.

* * *

From New Mexico comes the news that Santa Fe and St. Augustine, Florida, have declared a truce in their long-standing feud as to which city was first in American history. They've decided to call it a draw — and have exchanged messages of peace and goodwill. If the blankety-blank historians who started this row in the first place will also sign off we will have nothing but harmony in the future. There is too much war going on anyway.

* * *

I was out on the desert Sunday. The rains have worked a miracle. Ocotillo looks like a shaggy bear. I have never seen so many leaves on them—and millions of plants are poking their heads through the sand getting their first glimpse of sunlight and apparently liking it. With human hatred and greed engulfing so much of the world it is good to be close to the soil and wind and the life that goes serenely along despite the follies of the human race.

RELAX!



DACQUET PHOTO

IN THESE times of increasing stress and competition in city life, with war scare headlines daily growing larger, with neurosis sapping the vitality of American life . . . it is time to relax.

To live fully and richly, every man must take time to find himself, to rejuvenate his mind, spirit, and body. In no place can he find all the natural elements to accomplish this end better than in the desert. History bears this out.

If the ties bind you too closely, the Desert Magazine can at least liberate your mind and spirit, transport you to a world of peace and beauty. If you move at will, the Desert Magazine will show you the way to find those hidden places of charm.

Read the Desert Magazine every month and if you think it approaches the high mark set by its staff, tell your friends about it and see that they are introduced to the publication. Thousands of readers are thus finding a new world of adventure open to them.

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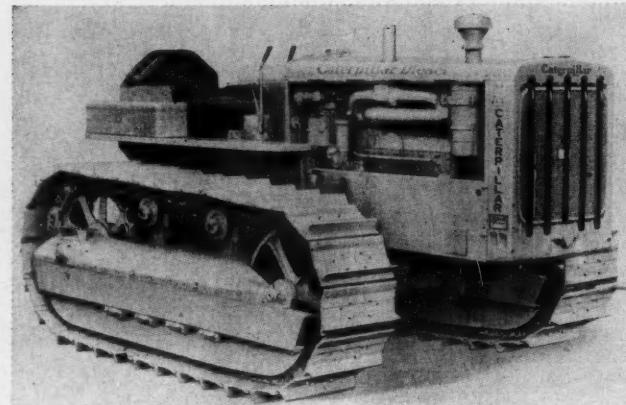
BEN HULSE

"IF I WERE BUYING A STACK OF BALED HAY"

... says the successful farmer. "I would insist on pulling out a few bales and tearing them apart to see what kind of alfalfa was in the stack — whether it was well matured and properly cured, and whether there had been any weeds in the field."

and I Would Buy a Tractor the Same Way

"If I couldn't go to the place where it was made, I would go to the show room and shops of the dealer, and I would insist on a detailed inspection of the machine, and a trip through the stock room where the parts are kept and the shop where the repair work is done. I would want to know it was a good tractor — and I would want to make sure the dealer was equipped to keep my machine in smooth continuous operation at a minimum cost.



"And after I had investigated "CATERPILLAR" and the Ben Hulse facilities for service and replacements, then I would go to my neighbors who operate "CATERPILLARS" and ask for their opinions."

24 Hour Service

A 24 Hour Service and Parts Department is maintained at all times for the convenience of "CATERPILLAR" owners in Imperial and Yuma Valleys. Owners know if a broken part or repair is needed during the rush season they will be able to secure it immediately at a Ben Hulse Store and an expert service man may also be obtained to help with the installation. 24 hours a day Service is important to the farmers of this section. In many cases it has meant hundreds of dollars, even thousands to be able to secure needed parts and service within a short time.

BEN HULSE TRACTOR AND EQUIPMENT CO.

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